

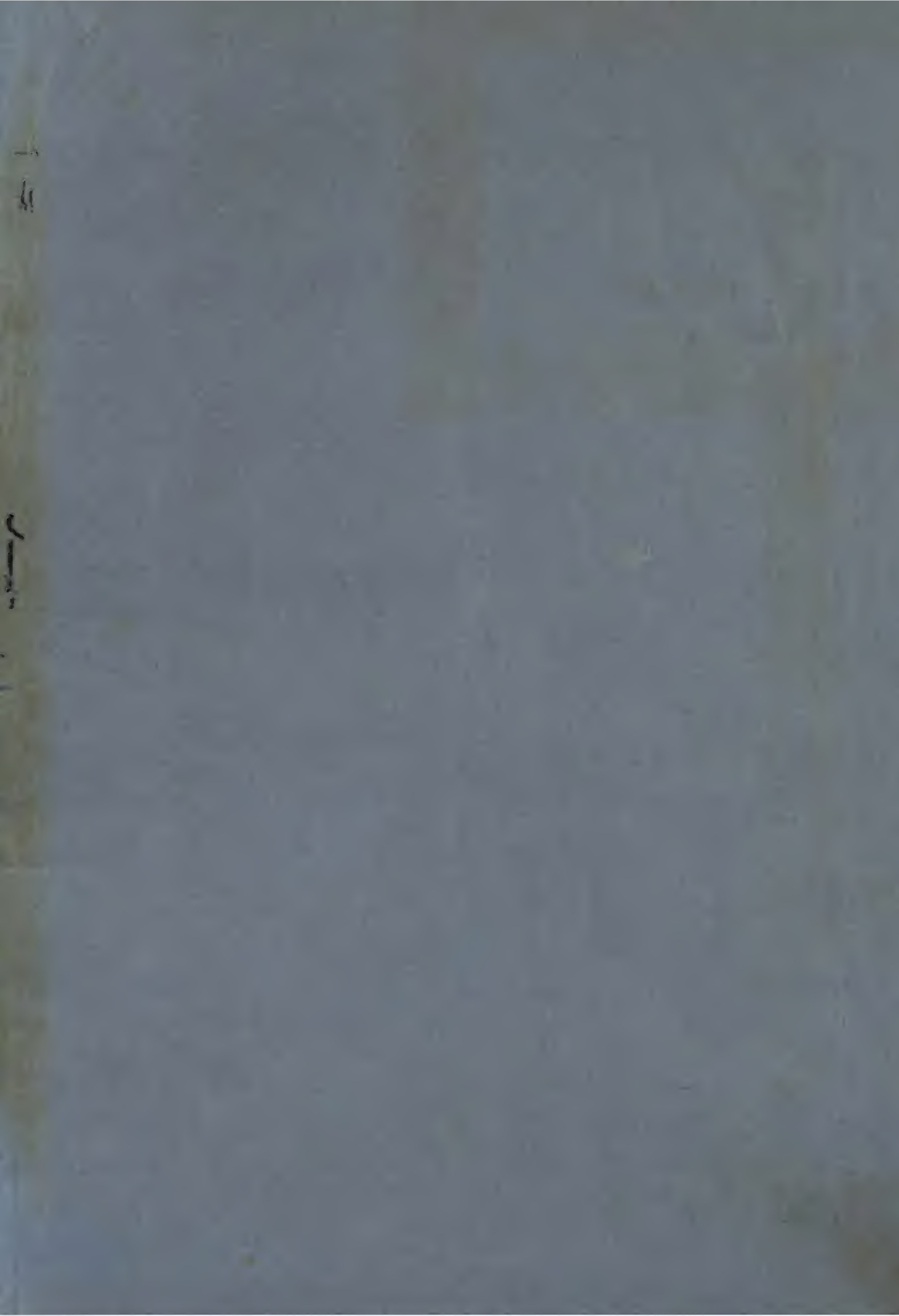
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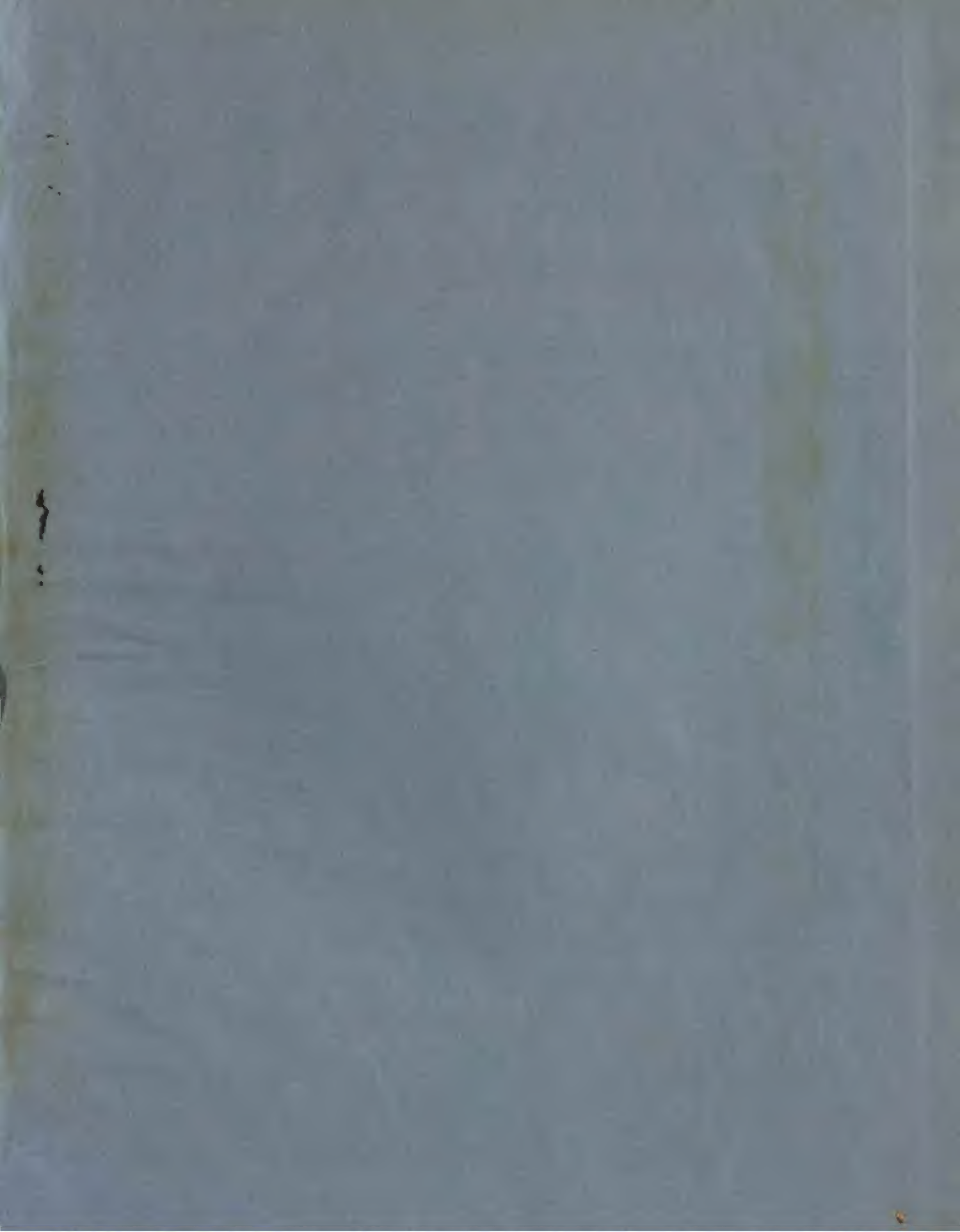




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NOT TO BE ISSUED

ANCIENT PAKISTAN

Bulletin of the Department of Archaeology

44534

UNIVERSITY OF PESHAWAR

Volume I



Year 1964

913.054705

A-P.



Published by the
Chairman, Department of Archaeology, University of Peshawar, Pakistan, 1964

Printed at
Ferozsons Limited, Peshawar
1000-25 - 9 - 64

CENTRAL ARCHAEOLOGICAL
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A MESSAGE

FROM
MR. MUMTAZ HASAN

PRESIDENT
MUSEUMS ASSOCIATION OF PAKISTAN

Mr. Mumtaz Hasan has very kindly sent the following quotation from the *Holy Qur'an* as the motto of the Journal :

كَمْ تَرَكُوا مِنْ جَنَّاتٍ وَعَيُْونٍ ۝ وَزُرُوعٍ وَمَقَامِرَ كَرِيمٍ ۝ وَ
نَعْمَةٍ كَانُوا فِيهَا فَاكِهِينَ ۝ كَذَلِكَ وَأَوْرَثْنَاهَا قَوْمًا
آخَرِينَ ۝ فَمَا بَكَتْ عَلَيْهِمُ السَّمَاءُ وَالْأَرْضُ وَمَا
كَانُوا مُنْظَرِينَ ۝

TRANSLATION

*How many were the gardens and springs they left behind,
And corn-fields and noble buildings,
And wealth (and conveniences of life), wherein they
Had taken such delight !
Thus (was their end) !
And we made other people inherit (these things) !
And neither heaven
Nor earth shed a tear
Over them: nor were
They given a respite (again).*

Surat-ud-Dukhan

FOREWORD

Pakistan ranks among the great "oriental" countries of old and shares the fruits of the first civilizations that dawned on the face of this earth in the very beginning of the human march towards the destiny of man. The urban revolution that saw the flowering of the Indus Civilization in West Pakistan was a process of give and take in the great river valley civilizations of the "Ancient Orient". Yet this "proto-Pakistan" culture has bequeathed an individuality to this entire Indus system, the meaning of which is abundantly clear today after the establishment of Pakistan. It is not difficult to visualize a new branch of learning which will be termed "Pakology" and will be devoted exclusively to the study of the great heritage that belongs to Pakistan.

"Pakology" offers a challenge to all those who are interested in the subject. The full meaning of the Indus Civilization will remain a secret until the Indus Script is deciphered. However, one thing is certain that the great Indus Zone was a part and parcel of the "oriental" world, and that throughout her history she was linked up with the great developments that took shape in Western and Central Asia. Whether one refers to the settlement of the Aryans in the country of the *Sapta-Sindhu*, or to the Achaemenian expansion in the *Hindu* (i.e. Indus) country, or to Alexander's march through West Pakistan and later the establishment of the Greek, Scytho-Parthian and Kushana empires on the Indus or to the final coming of Islam and the incorporation of this region in the Islamic world, a student is impressed with her individuality and her link with the west. It is time that historians and archaeologists should reveal the secrets of her vitality and the link that she has been able to establish with the world forces in history. For it is history that reveals the truth above politics and diplomacy. And a country like Pakistan has deep roots in history, going much further back than the time when the new name "Pakistan" was applied to it in 1947.

The Journal of the Department of Archaeology is devoted to the study of the rich heritage that belongs to Pakistan and the place that this heritage occupies in the developing civilization of humanity. The heritage is a gift of God to the Pakistanis, and its understanding and interpretation is a special responsibility of the scholars in Pakistan, for it is on the firm and intelligent foundation of the past that we build the edifice of the future.

For this new venture to add to the human knowledge, I wish a great success to the Department of Archaeology and further hope that the world of scholars will lend their cooperation to the fulfilment of the great aim.

Sd: Mohammad Ali,
Vice-Chancellor,
University of Peshawar.

30th April, 1964

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Pl. I — Sanghao Parkho — Darra Cave.

Sanghao Cave Excavation

The first Season: 1963

By Professor Ahmad Hasan Dani

Peshawar Valley has long been known as the Ancient Gandhara. It is rich with the art treasures of the early historic period devoted mainly to the propagation of the Buddhist faith. The richness of the Gandhara art has exclusively claimed the attention of the archaeologists so far, other fields and periods being sadly neglected in this region. Even the Gandhara art is studied chiefly from the point of view of its borrowed technical tradition and style criticism, and no attempt has been made to relate this art to the socio-economic context of the Scytho-Kushana period that gave birth to it. The complexities of human life that produce one or the other art have been poorly understood. In order to meet this deficiency the attempt was made by the University Department of Archaeology at Peshawar to open up new fields and to throw light on the general run of human life in this region. Their first venture was successful in discovering a prehistoric cave at Sanghao, and the first season work yielded a rich stratified deposit of Middle Stone Age tools in the cave. This new study led to the first prehistoric excavation in Gandhara and simultaneously paved the way for enquiry into the Pleistocene stratigraphy in this region. The report of the first season is given below by the excavator.

Introduction

The establishment of the Department of Archaeology in the University of Peshawar, first of its kind in Pakistan, was a happy decision on the part of the authorities, for Peshawar stands in the centre of archaeological sites that abound in this region of ancient Gandhara. Peshawar can thus afford the best opportunity for field training to the students of archaeology. But the archaeology in Gandhara has for long become static — almost confined to the early historic period mainly relating to the Buddhist ruins from 1st to 5th centuries A.D. Apart from this, it must be stated, no new archaeological field ¹ has been opened in this region. The incentive was lacking because archaeology has never before been a university subject in Pakistan. But there are present here many other fields that remain to be explored and excavated. One such new branch is described in this report.

1. There are only two exceptions to this statement. The megalithic complex at Asota has been described by Sir Mortimer Wheeler in *Five Thousand Years of Pakistan*, London, 1950, p. 35. The other relates to the discovery of bronze age grave complex by the Italians at Mingora in Swat but not yet reported. Similar graves discovered by the author will be reported in the next issue.

It was in November 1962 that I went to see the Buddhist ruins ² at Sanghao in the company of Mr. M.A. Shakoor, the then curator of the Peshawar Museum, and the members of the Japanese Archaeological Mission in Pakistan. No sooner had we entered the Sanghao valley, which is enclosed in a circle by the spurs jutting out from the main hill, I was struck with the rock formation and the conglomerate deposits occupying the northern flank of the spurs. Large nodules of limestone had been rolled down the hill, broken up into pebbles and carried by river torrent (*khwar*) in its bed. With them were imbedded several fossil tree trunks. What was the meaning of all these? The question gripped my mind, and I lost all charm for the Buddhist ruins that are so familiar to us in this region. The thought of pebbles hovered in my mind, and sometimes I recalled to memory the pebble tools of the Soan valley in Rawalpindi district of Pakistan, but none could I lay hold upon here. I was now desperate and started picking up one kind of stone, which I could distinguish from others, but they were not necessarily tools. My companions discouraged my efforts. Only my student, Mr. Shujaul Mulk, stayed behind with me helping in carrying the stones. They were, of course, not tools, but they helped me in formulating my future step. Suddenly my eyes fell on a scatter of quartz in the field. I thought of microliths, but no microlithic tools could be recognized. However, I was happy to fill another pocket with quartz bits. While my companions were sorry for my wasting time and not seeing the Buddhist monasteries, I was happy to roam about in the valley in the company of the village boy Miskin. There suddenly rushed forth a group of monkeys! What for did the monkeys come in this valley? Miskin led me on to the water spring and gave me some forest berries. He said, "The monkeys eat them and we also." And out came from my mouth: "And thus they were eaten by men in the past". Who were they and where did they live? Miskin got the idea and this time he led me on to the caves. One cave after another — small, medium and big — until I reached the largest cave. There I decided to rest and brood. The cave is now occasionally used by herdsmen during stormy weather. Could this not be used in the past? My answer was in the affirmative, but my other companions, who came round there, would still regard it as a Buddhist cave because they had already seen a cave at Kashmir-smast used by the Buddhists. I sat down, made a deep hole, and dug out this time, no doubt, quartz tools—tools of the most unusual kind in the most intractable raw material, and I decided to stake my future on the excavation of this cave.

Fortunately Mr. Mohammad Ali, the Vice-Chancellor of the University, agreed to my proposal of excavation and was kind enough to provide funds. The member of the local Union Council, Mr. Gul Rahim, and his brother, Mr. Abdul Halim, were good enough to get the approval of the local villagers to my excavation at the cave, and later they played host to the whole excavation team. We had the benefit of staying at their *hujra* during part of our work. The excavation was carried out under my direction in two short periods lasting for three weeks in all. I am glad to acknowledge the assistance of Mr. Farzand Ali Durrani, Senior lecturer in the Department of Archaeology, Mr. M.A. Shakoor, Mr. Farid Khan, and a batch of

2. For detail see Major H. H. Cole: *Memorandum on Ancient Monuments in Eusofzai, with a description of the explorations undertaken from the 4th February to the 16th April 1883, and the suggestions for the disposal of the sculptures.* Simla, 1883, pp. 10-22.

Fig. 1



fifteen students of the department. The photographs were taken by Mr. Mohammad Sabir, the photographer, and the plan and section copied by Mr. Mohammad Daud Kamal, the draftsman, and Mr. M. Sabir, a student of the Department of Geography. It is the cooperation of all these persons that made the excavation a success. At the end I must also thank Lt. Col. Faizullah Khattak, the Registrar of the University, Maulana Ahmad Hasan, the treasurer, and Mr. Aslam Khan, the business officer, all of whom helped me in several ways in administrative matters.

Geographical Setting

Sanghao is today an insignificant village situated in a secluded corner at the foot of the hill that separates Buner from the district of Mardan in West Pakistan (Fig. 1). It stands on an elevation of 1700 feet, 21 miles due north-north-east from Mardan, at north latitude $34^{\circ} 28'$ and east longitude $72^{\circ} 12'$. The name Sanghao is derived from the old Sanskrit word *Sangha*, meaning a (Buddhist) monastery and obviously implies the many ruins of the Buddhist period spread over in the valley. These Sanghao ruins are not isolated by themselves as the modern village appears to be, for to its south about twelve miles away stand the famous monastic ruins at Jamalgarhi and to its north at Palai have been found several Buddhist sculptures. In between can be seen the mounds at Chichardheri, Shamozaï, Babuzai, Miyan Khan and Kui Barmol. Still further to the north lies the entire valley of Swat, which was bubbling with monastic life in the past. In this long chain of Buddhist expansion Sanghao stands in the middle, not far from the Shahkot pass, which appears to have given an easy access, in the past, from the valley of Peshawar to that of Swat and vice-versa. Sanghao is thus on an old route and its monastic prosperity depended on the maintenance of this route. The diversion of this route along the Malakand pass led to the impoverishment of the populace in this region. As it will be shown below, the Buddhists followed earlier peoples who have left behind several periods of cultural occupation along this route.

Judged from the modern geographical map, Sanghao does not play any significant role. But Foucher³ correctly realised the importance of this place and opined that the Chinese pilgrim Hiuen Tsang followed this route. If one places Sanghao in the old Gandhara, which was mainly the valley north of the river Kabul, including a pocket of the Peshawar area on the Bara river, its position can be better understood. This northern valley of the Kabul is further divided by a low range of hill, broken in several places, bearing the name of Paja Hill that shoots out from the main eastern range and ends at Takht-bahi. The modern road to Malakand from Peshawar goes around this hill. North of this hill is the region of Baizai and south that of Yusufzai — two names of the Pathan tribes. The Paja Hill makes a beautiful landscape in the valley and has naturally led to several folk stories. In the past it was the rendezvous of the Buddhists. At its eastern end we have the rock edicts of Aśoka at Shahbazgarhi, in the middle are the remains of Jamalgarhi and at the western end is the Takht-bahi monastic establishment.

3. *Notes on the Ancient Geography of Gandhara*, Eng. Tr. by H. Hargreaves, Calcutta, 1915, p.32.

The main drainage from Baizai into Yūsufzai is provided by the river Kalpani (wrongly corrected as *Chalpani*⁴ meaning flowing water), correctly *Kalapāni*, meaning water (or river) of destruction. The name is very significant. It drains the water from all the torrents coming from the hills, and hence during the rains it causes great havoc.

At Jamalgarhi there is a break in the Paja Hill, through which passes the Mardan-Katlang road, at the end of which stands the village of Sanghao. Immediately behind this hill the road cuts the Chichardheri into two. Beyond the *Dheri* lies a wide open plain which gradually rises towards the north and east until we reach the foot of the hills. In this area there is only one irrigation canal that comes from Dargai headworks and flows beside the village of Katlang. The land south of this canal is well irrigated, thus making a change in the local economy since 1947, but the northern part, being higher, is left to the mercy of annual rain. The horizon on the north is marked by the Malakand ridge running east and west. The east is flanked by a long range of hill, called Sakra Hill. It has a jagged skyline. From these main north and east ranges spurs jut out into the plain, each of them being separated by a drainage channel. At places wherever there is a suitable catchment area, water springs can be seen (Pl. IV). Sometimes the spurs are long enough to enclose small valleys, locally called *Tangai*.

Six miles beyond Katlang can be seen the hamlets (Pl. II) of Sanghao right at the mouth of an enclosing spur, called Machizai, the inner side of which properly limits the Sanghao valley. The spur abruptly ends at the eastern edge of the village but at the western end an outcrop apparently continues the spur and runs only a little short of the Malakand ridge. Significantly this outcrop is called *Khandao*, meaning a break, from the Sanskrit word *Khanda*, as it is really a break from the main hill. It is through this break that the old route to Kui Barmol ran, though the villagers sometimes like to climb up the hill and go across it.

The Sanghao valley is a rugged area of undulating plains broken up by *Khwar*s (torrents) and the sides shredded by piercing spurs shooting out from the main northern and eastern hills. The plains rise gradually from the level of the *Khwar* to the hill slopes, and quite naturally the villagers have distributed the cultivable land into terraced fields (Pl. V a). The fields are strewn over with limestone gravels and quartz bits. Some of them have been piled together by the humble ploughmen at the hedges of the fields in order to demarcate the boundary. It is from among them that the late stone age tools (to be described in a later issue of the Journal) have been picked up. As the water is scanty and the soil not very deep, cultivation is done in the most crudest manner possible. No tubewell is known in this area. However, some wells of the Buddhist period are seen in the valley. The rain water is now collected into two tanks, and several devices are adopted to channelise water from one field into another (Pl. III b) until it finally flows into the *Khwar*. The tanks are also replenished by an overflow of water from the natural springs, which are now connected by pipelines (Pl. III a). These

4. *Gazetteer of the Peshawar District*, 1897-98, p. 12.

springs are main life source for the people of this valley, and it is about them or due to them that the whole fauna and flora throbs in the valley. It is no wonder that a *tangai* or *darra* (canyon) flowing with water is often a bone of contention between the villagers. It is near the spring that the old village was situated until it was shifted to its present spot by the British for reasons of protection and control. It is also for this reason that the Buddhist establishments were located on the hill spurs. These spurs have small flat areas at different heights just sufficient for small settlements. Within the large Sanghao valley there are small *tangais* or *darras* (canyons). Beginning from the south they are known as Sharmkhan, Bagh-darra, Parkho-darra, Rod, Tangai, Haya-tangai and Natthu (Pl. VI a). The Buddhist ruins (Pl. VIII a) are today seen in the last four canyons as well as in the neighbouring Nalo-darra which lies immediately south of Bagh-darra across the spur. In these smaller canyons natural caves (Pl. VII b) are seen, the most important being in Rod, (Pl. VII a), Parkho-darra and Bagh-darra. All these caves were used occasionally by the Buddhists, and their remains are seen on the top surface. Today the herdsmen, who bring their cattle for grazing in the hill slopes, sometimes occupy the caves to protect themselves from burning heat in summer or drive their cattle into them to avoid stormy weather. Occasionally a group of hunters pass vigilant nights waiting for the game animals that still roam about and come to drink water at the springs. Vegetation in the valley is few and far between. Near the water sources bushy jungle is seen, otherwise scrubs and scattered grass are found in the interstices of the rocks and in the plains left free from cultivation. No tall trees are found here probably because they are cut away by the villagers.

It is in the Parkho-darra that the excavated cave (Pl. I) is situated about 3 miles away from the village of Sanghao. The *darra* is longitudinal, lying east and west between two spurs, the cave being located in the southern one and facing north. At the foot of the northern spur is a little *khwar* (torrent) full of gravels in its bed. Between the cave and the *Khwar* there is a flat space (see fig. 5) of 100 feet on the average, composed of modern alluvium overlying an earlier geological fill. It is in this flat area that cultivation has been going on for centuries. Similar cultivable land is available on the top surface of the spur over the cave. The dressing of these fields with diaper masonry (Pl. V b) suggests Buddhist hand. But pre-Buddhist cultivation is not ruled out.

Geological Setting⁵

The village of Sanghao stands at an elevation of about 1700 feet, and the cave lies at an elevation of about 2000 feet near the mouth of one of several canyons with narrow deeply alluviated straths which debouch east of Sanghao and join to form the piedmont plain which slopes south and west to the Swat river. Long spurs upto 4000 feet in elevation lie a couple of miles north and south of Sanghao and extend south-westerly for several miles beyond the village. The main north-south ridge

5. Based on the contribution of Prof. John Eliot Allen, Professor of Geology at the University of Peshawar (1963-64), originally of Portland State College, U.S.A.

to the east (the divide between the Swat and Indus rivers) is even higher, culminating in Paja peak at 6747 feet elevation (Fig. 2).

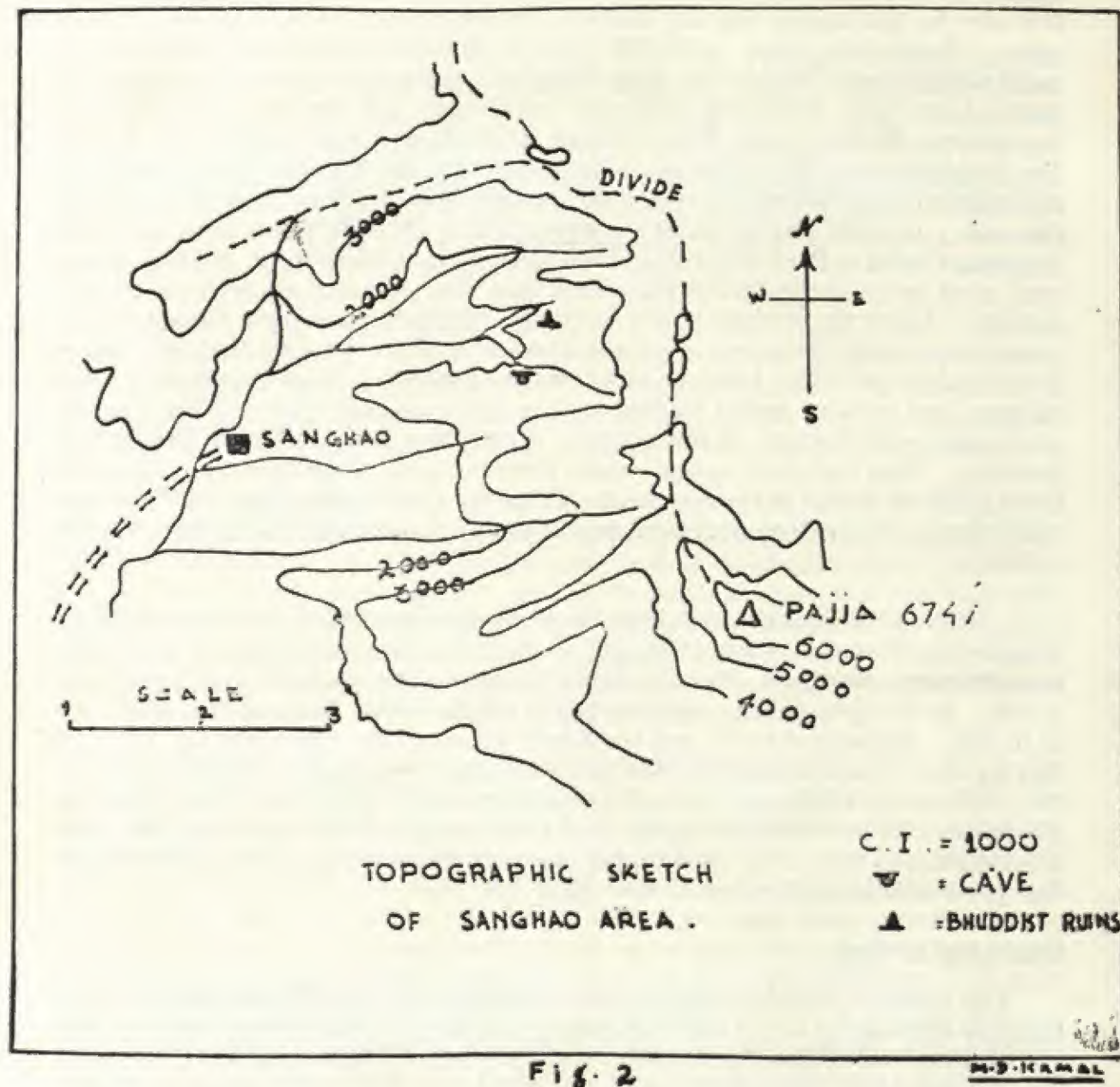


Fig. 2

Bedrock (Pl. VI b) near the cave consists of phyllite and schist, and minor calcareous sandstone referred by King to the Lower Swat-Buner schist group, of

lower Palaeozoic age. Above the schist, both capping part of the ridges to the north and south, and making up the higher parts of the main ridge to the east, is a massive grey limestone from one to two thousand feet thick, possibly more. This limestone is severely contorted in detail, and cut by numerous calcite stringers and veins.

About 300 feet north of the cave across the canyon, and about 50 feet above the alluvium, white vein quartz crops out for a few tens of feet along the axis of a minor anticlinal fold in the schist. It varies in thickness up to over three feet, and was obviously mined as a nearby source of artifact material.

The cave (Fig. 3) itself lies within a cemented limestone conglomerate, or better, breccia, since most of the boulders are very poorly rounded to angular.

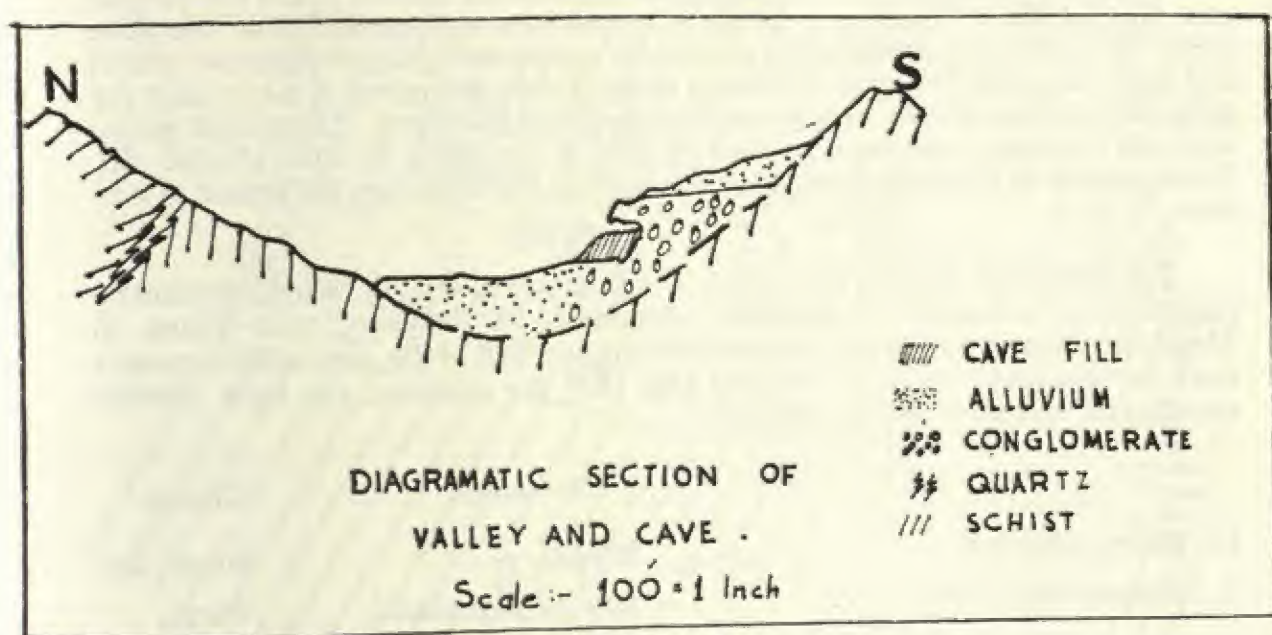


Fig. 3

The deposit is at least 50 feet thick, made up of limestone fragments predominantly, from a few inches to several feet in diameter, derived from the erosion of the limestone in the ridges above and deposited as a conglomerate probably during the Mindel glacial stage (400,000 to 500,000 years ago). Krishnan⁶ describes the Lei conglomerate of the Potwar area, with which it may be correlative. Wadia correlated this with the Terrace 1 of Kashmir. Colber and Lewis call the Lei conglomerate upper lower (Villafranchian) rather than lower upper Pleistocene. The coarseness of the deposit is said to have been caused by uplift of the adjacent mountains. It might equally well have been caused by increased precipitation and alluviation during a glacial stage.

6. M. S. Krishnan, *Geology of India and Burma*, Madras, 1949, pp. 548-9.

The Vale of Peshawar:- The vale of Peshawar lies between the Indus river on the east and the foothills of the Hindu Kush on the west. It occupies a structural basin south of the Himalayan foothills which has been cut off from the southern part of West Pakistan by the rise of the Salt Range and the line of hills which extends from Attock to north of Kohat. As this folding (and faulting) progressed during upper Cenozoic time, the basin was filled with alluvial materials from the surrounding hills, brought down by the Kabul, Swat and Indus rivers and their many tributaries. Indeed, the evidence of high terraces around the periphery amply indicates that the pre-Pleistocene topography was "drowned" during the lower Pleistocene by the accumulation of valley fill to an elevation several hundred feet above the present valley surface, and that erosion during the upper Pleistocene has removed much of this older fill and redeposited a series of sediments which are described below.

The present valley floor is occupied by the braided courses of the few permanent (Kabul, Swat, Indus) and the many intermittent streams and their interfluvial areas. Towards the surrounding youthfully sculptured hills the piedmont plains and fans rise gradually, with alluviated valley straths extending in many cases for miles into the mountains between enclosing spurs and ridges. Occasional extensions of the spurs have been isolated far out in the plains by the alluvial fill. Terrace levels at many elevations have been cut in the fill during the period of erosion.

The Composite Section (Fig. 4):- The generalized section below represents a composite of a number of localities, particularly at Sanghao, near Thana in Malakand Agency and at the Kalpani near Jalala. All of the units are not present in all the localities, but it is believed that they do represent the same climatic epochs and therefore are correlative.

<i>Unit</i>		<i>Correlation</i>	<i>Climate</i>
1. Recent alluvium	.. ..	Recent	Warm, dry
2. Kalpani lake beds	.. ..	Late or post glacial	Warm, moist
3. Younger loess, in places red-stained at base	.. ..	Last glaciation	Cool, dry
4. Cemented gravel and breccia	.. ..	Last interglacial	Cool, moist
5. Older loess, in places fine clay	.. ..	Penultimate glaciation	Cool, dry
6. Laterite zone	.. ..	Penultimate interglacial	Warm, moist

The archaeological correlatives might be considered as:-

1. Neolithic	.. ..	To 3000 B.C.	Recent
2. Microlithic	.. ..	3000 to 15,000	Upper Wurm and Recent



IDEALIZED COMPOSITE SECTION
IN PESHAWAR VALLEY
NOT TO SCALE

Fig 4

<i>Unit</i>	<i>Correlation</i>	<i>Climate</i>
3. Late Palaeolithic (Middle Stone Age) ..	.. 15,000 to 50,000	Würm or Wisconsinian
4. Early Palaeolithic (Early Stone Age) ..	.. 50,000 to 250,000	Wisconsinian and Last Interglacial
5. " ..	.. 250,000 to 400,000	Mindel or Illinoian
6. " ..	.. 400,000 to 550,000	Penultimate Interglacial

Description and Interpretation of units:-

1. *Recent Alluvium*:- It occupies erosion channels in older sediments and bedrock, and consists of loose sand, gravel and boulders, derived from sediments and adjacent bedrocks of the upper parts of the drainage channels. It represents the Recent erosion which has formed the stream courses and *nullahs*.

2. *Kalpani Lake Beds*:- They are found beneath the present surface of the plains in the area between Dargai and Mardan, exposed in the banks of the Kalpani *nullah* lying above the Younger Loess. Some sections show up to 30 alternating coarse and fine beds which constitute varves, up to 8 inches thick. The sediment is grey clay, silt and sandy silt. The beds are cut by numerous clastic dikes of silt, a characteristic commonly found in varved pro-glacial or peri-glacial lake sediments. The varves represent the accumulation in a lake of fine sediment derived from melting ice; in this case the ice of the Last Glaciation or the ice of post-glacial alpine glaciers. They may be from 3000 to 15,000 years old.

3. *Younger Loess*:- It consists of unbedded, fine-grained buff-coloured silts which are probably dominantly eolian in origin. The basal part is sometimes red-stained. They underlie the lake beds in the Mardan region, but are found at higher elevations in the tributary valleys around the basin and in the Swat valley near Thana, where they form the sloping surfaces of terraces along the tributary streams, being overlain along the margins by slope wash from adjacent hills. They may be correlative with the thick "badlands" loess north and east of Campbellpore. Artifacts near Thana lie in but may be intrusions within the Younger Loess. Artifacts at Sanghao cave may be correlative. The Younger Loess represents the cool and relatively dry period of steppe climate during the Last Glaciation. They are probably from 15,000 to 50,000 years old.

4. *Cement Gravel and breccia*:- They lie between the Younger and the Older Loess, their thickness ranging from a few feet in the valley centre to a few tens of feet near the hills. They are heterogeneous in composition, completely unsorted as to the size (up to boulders several feet in diameter), and of angular shape. The valley sections are only partially cemented by calcium carbonate, the limestone

conglomerate at Sanghao cave is wholly cemented. These gravels represent a period of cold wet climate characterized by freezing and thawing and excessive solifluction, mud flows and flooding. Their wide distribution suggests that this was an important climatic change, the cementing of the gravels indicates excess flow from lime-bearing spring or streams, the lack of sorting indicates freezing and thawing. It probably represents the Last Interglacial, dated at from 50,000 to 250,000 years ago.

5. *Older Loess*:- It is found beneath the Cement Gravel at most localities. Its thickness is not known in the valley sections, it lies on bedrock in the tributaries. At Sanghao it may be represented by a clay zone beneath the Cement Gravel. In the field no differentiating characteristics between it and the Younger Loess has been noted, but laboratory work is being initiated to determine size range, degree of weathering, kind of clay, minerals etc. Like the Younger Loess, this unit represents a glacial period of cool dry steppe climate. If this is the penultimate Glaciation the Loess would be from 250,000 to 400,000 years old.

6. *Laterite Zone*:- In a few places the lower part of the Older Loess is reddened and in a few other places it rests upon a more or less well defined zone of lateritic soil. There is a red zone below the clay horizon at Sanghao, exposed beneath the cement gravel in a bend at Parkho-darra. If this laterite zone represents the Penultimate Interglacial, it is from 400,000 to 600,000 years old.

Conclusions

The extremely tentative conclusions suggested in this paper need verification by further field work and detailed description and measurement of the mentioned sections and as many others as can be found over a still wider area. In addition laboratory work should be done on the various units to determine possible index heavy minerals, distinctive histograms, and other characteristics which would verify correlations made here. Pollen for analysis should be searched for in the loess and lake beds; carbon for C^{14} analysis may be of value in the uppermost units. lacustrine fossils or vertebrate remains may be found to add to the evidence.

To date we can only state that the "Potwar Loess" of Wadia is no longer a single unit; a peri- or post-glacial lake once occupied a basin near Mardan; the loess is divided into two parts by a cemented gravel of widespread occurrence which represents a change in climatic conditions. The Middle Stone Age material in Sanghao Cave may be correlated with Younger Loess.

Parkho-darra Cave (Pl. I and Pl. IX).

The cave, Prof. Allen suggests, probably originated as an overhanging re-entrant resulting from meander undercutting in limestone breccia of the terrace on the south bank of the *Khwar* after incision of the terrace in upper middle Pleistocene time. The tools found in the cave confirm this dating. Later the cave was enlarged and extended by rock-fall and weathering. Such weathering and later

cracks (Pl. XII a) are writ large on the face of the cave. Huge falling boulders have left hollows (Pl. X) in the face, and later rock falls are still lying in front of the cave (Pl. IX).

The cave (Fig. 5) consists of three main parts—the main cave (no. II) measuring

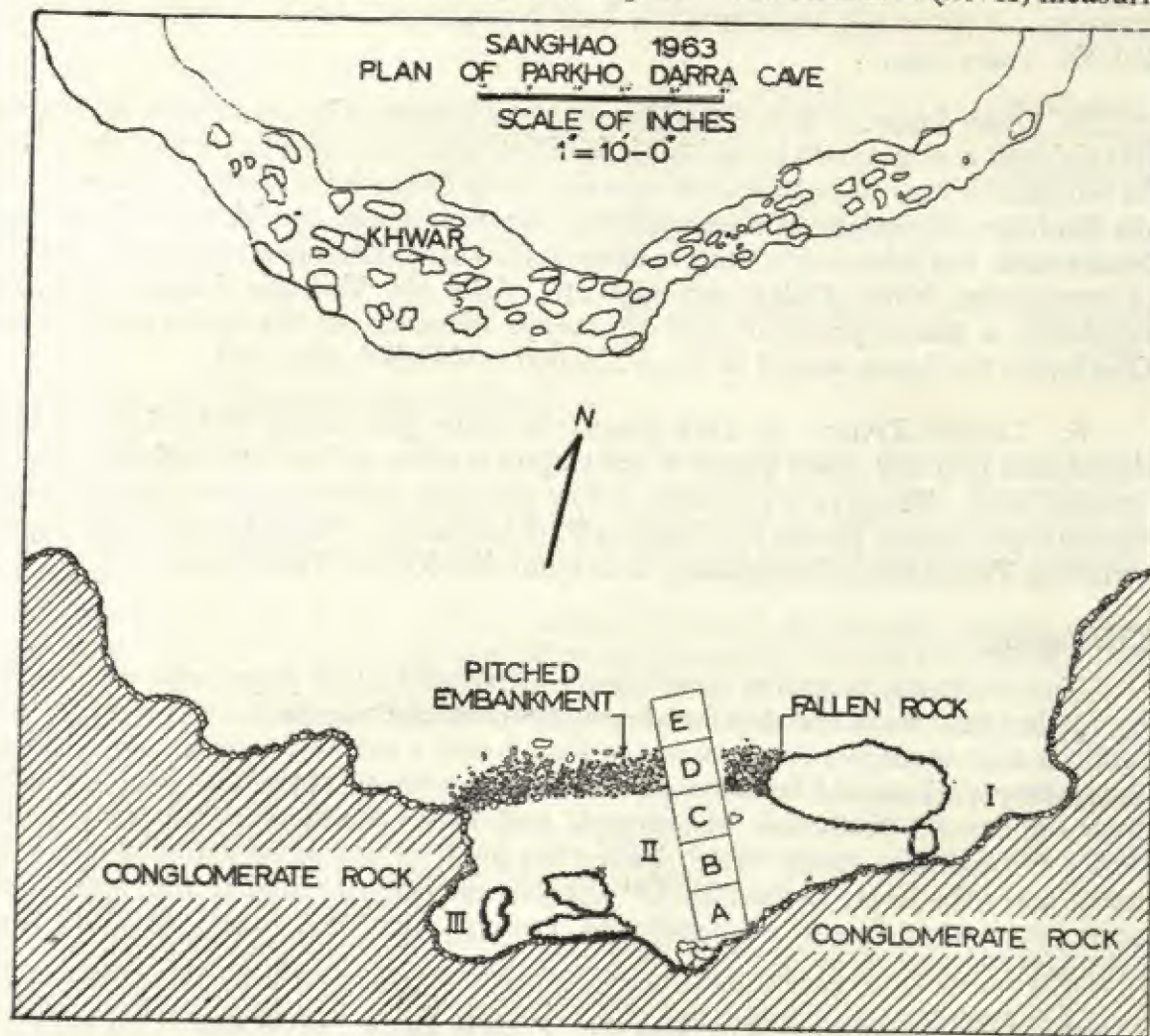


Fig. 5

80' long by 35' deep by 14' high, a fallen portion (no. I) with a big boulder and a tree in front, and a low cave (no. III) separated again by a boulder fall (Pl. XI b). Further away to the west can be seen the beginning of more cave formation (Pl. XII b) in two stages. The lower portion is just a wide opening, where one man is seated in the photo, and the upper one provides a little space for rest. The main cave (no. II) is irregularly made up. The ceiling (Pl. XI b) shows a rough curvature, the underside of which is thickly coated with black soot (Pl. XI a). At one place there is a deep hollow, 5' deep, suggesting that the breaking away from the conglomerate took place at different times. Some of the fallen material was encountered in layer no. 9. As will be shown subsequently, after this fall the cave was abandoned for quite a long time. Even after the cave was finally given up, a big slice fell

down (Pl. XI b), which now rests on the present floor level. Probably it is this risk of fall that led to the final desertion of the cave.

The present floor of the cave stands five feet above the level of the ground. There is a ramp of stone pitching (Pl. XIII b) that slopes down from the cave floor to the ground level. This pitching is very haphazardly done, and does not seem to be the work of one period. It appears that the upper layer of stones were thrown by the modern cultivators, though the lowermost stones must have been thrown by earlier men at least from the time of the Buddhists (See Fig. 6 for the section). This pitched ramp was originally full of bushes (Pl. XIII a) which had to be cut and removed before the excavation could start.

Excavation of the Cave

The excavation in the first season was mainly exploratory: devoted to two main problems - (1) to find out the depth of the deposit in the cave, and (2) to understand the nature of the deposit. These two problems were sought to be solved by vertical digging from the top of the occupation to the rock bottom of the cave. The result was highly successful.

Summary of the result:- There was fifteen feet of deposit in the cave from the top to the rock bottom, the deposit being divisible into twelve different layers (Fig. 6.) Each layer is separated from the one below by an ash-and-charcoal line. The occupation deposit in the cave suddenly stops at the cave entrance, beyond which spreads out the rubbish thrown by the cave dwellers. It is very difficult to distinguish same number of layers (Pl. XIX a) in the rubbish deposit outside the cave. But in general both of them agree in the main occupation periods.

Five main periods have been distinguished in the excavation. Beginning from the bottom, *Period I* includes layers 12, 11 and 10 in the cave and 6 A outside the cave. The period ended in the fall of a big slice of rock from the ceiling that covered the deposit below. It appears that the cave was not occupied for some time because of the risk of fall.

Period II includes layers 9, 8, 7, 6 and 5 in the cave and layer 5A outside the cave. There is a change in the colour of the raw material used in this period. The majority of them show red staining, the staining being the result of the red colour of the soil. The period also closed with a slight sliding of the back rock noticeable in the trench.

Period III includes layers 4 and 3 in the cave and layers 4A and 3A outside the cave. In this period the layers are made up with loose reddish clay, probably derived from the top reddish soil seen in the valley. The top of this occupation is disturbed by the people who came to occupy period IV, which consists of layer 2 inside the cave and layer 2A outside.

Periods I, II, and III have purely stone age material, while period IV shows late historic material referable to the time of the Buddhists, circa 2nd century B.C. to 2nd century A.D.

Period V is a natural deposit outside the cave including layers 1, 1A and 1B, which obviously filled in after second century A.D. It is in this period that the rock now seen lying on the floor inside the cave (Pl. XI b) fell down.

New Problems:- The excavation created two new problems during the course of the work. They remain to be solved in the coming season's work.

(i) A small trench laid outside the cave at the bottom of the deposit revealed layer 7A and the same kind of stone tools as encountered in Period I. For lack of time the excavation had to be stopped. It is necessary to extend this trench in the open space available in front of the cave right up to the *Khwar* and dig down up to the basal rock so as to reveal probably an earlier occupation deposit. This is likely to solve also the geological stratigraphy of this area—specify the filling in the valley floor between the basal rock.

(ii) The vertical dig inside the cave has to be extended horizontally and the rich prehistoric material has to be collected carefully so as to reveal the complete life of the prehistoric man. It is possible that the side parts of the cave might contain some burial. The charcoal has also to be collected for radio carbon dating.

Detailed report

As shown in Fig. 5, a long trench 50' by 10' was laid perpendicular to the long stretch of the cave. The length was further subdivided into five small trenches 10' each (Pl. XIV, a and b). Originally a small balk of 1' was kept in between the trenches. Out of them trenches A, B and C were inside the cave and D and E were outside the cave. Practically the whole of D was covered by the pitched embankment (Pl. XIII, a and b) and was completely overgrown with bushes. After removing the bushes the excavation was undertaken trenchwise. Towards the close of the excavation the balks were removed and the embankment was also cleared so as to get a clear view right across the cave (Pl. XVII) and get a section right through (Pl. XVIII).

The excavation continued right up to the rock bottom in the cave, which showed a very rough surface occupied by limestone nodules with grit and sand deposited in the holes obviously by river action. The gravels stop short in the cave and against them is packed compact white clay (Younger loess), in time later than the conglomerate of the cave but earlier than the occupation material in the cave (See above on Geology). A trench in this compact clay yielded layer 7A and produced stone tools of the same type as in Period I. For lack of time the excavation had to be stopped below layer 7A, though the tools continue downward. Virgin soil was not reached in this trench. Inside the cave the first period began with layer 12 having a regular habitation indicated by ash and charcoal left-overs together with animal bones, teeth, fragments of horns and plenty of quartz tools and waste quartz. Besides quartz we also found schist fragments including points and edged tools. The size of the tools in Period I is comparatively larger than the tools of the later periods. The layers in this period are composed of yellowish or whitish hard clay, mixed with grit, sand and charcoal inside the cave and containing tools of white quartz. Red staining was noticed on rare specimens of quartz, suggesting

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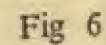
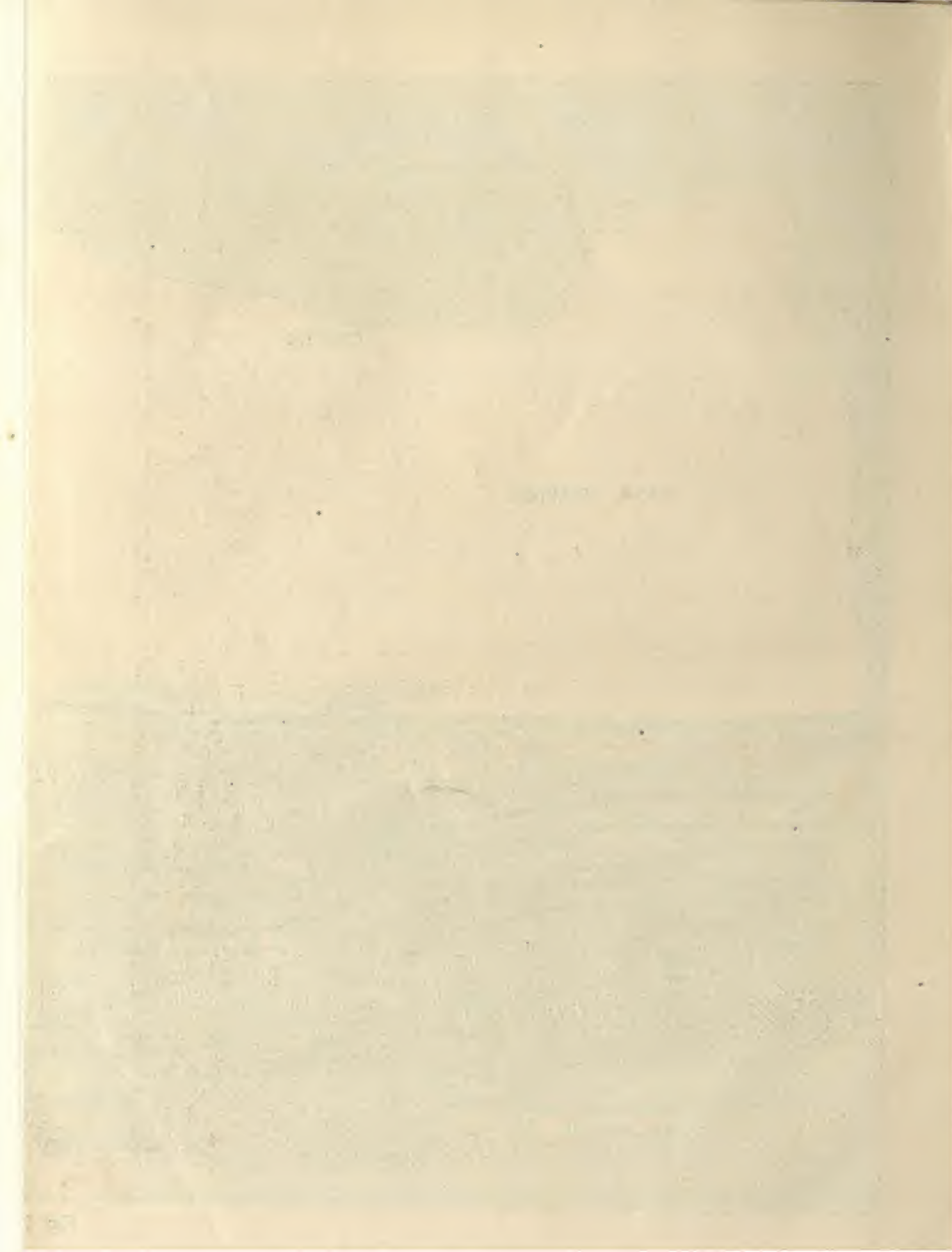
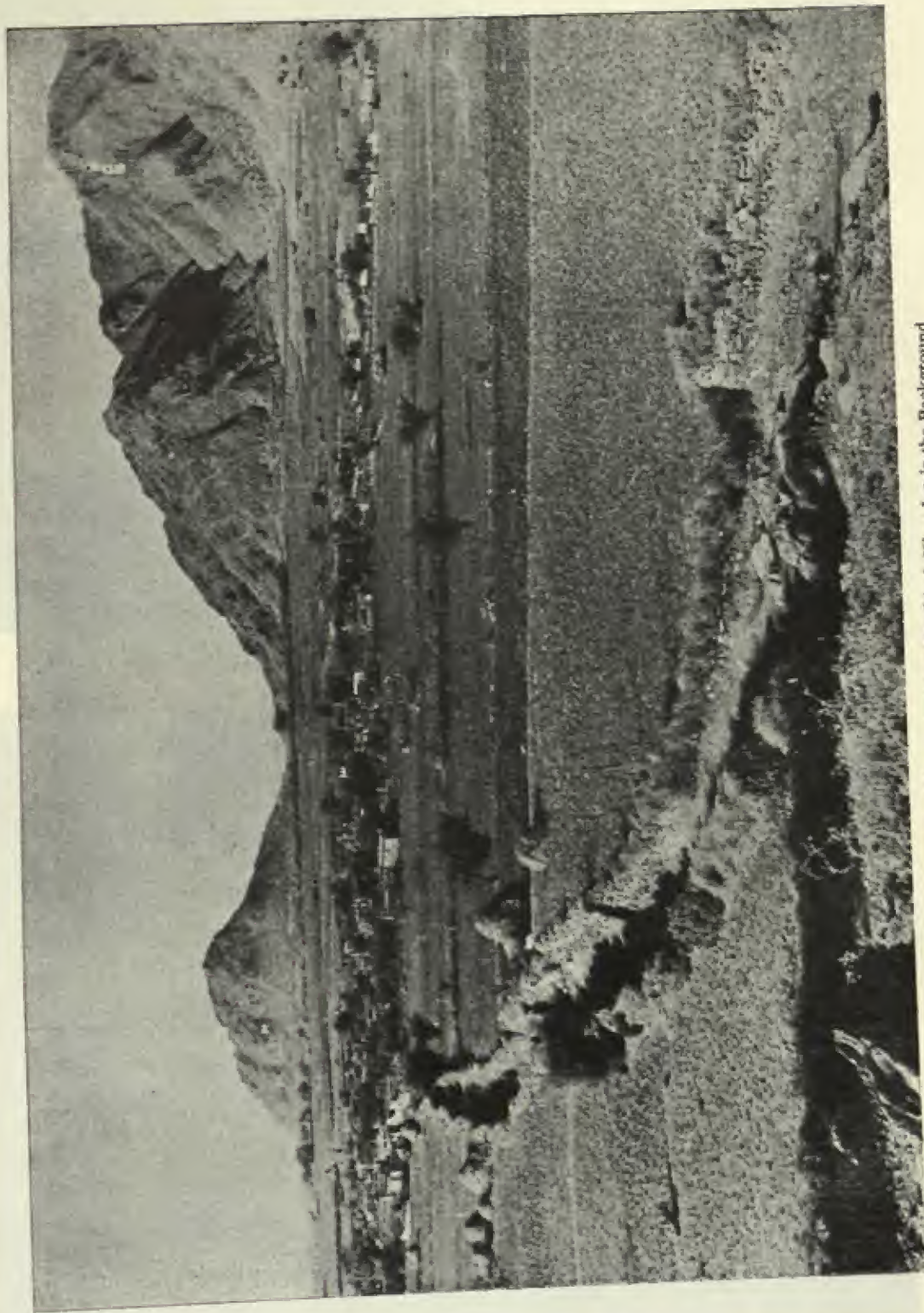
$$f = f - \sigma$$


Fig 6





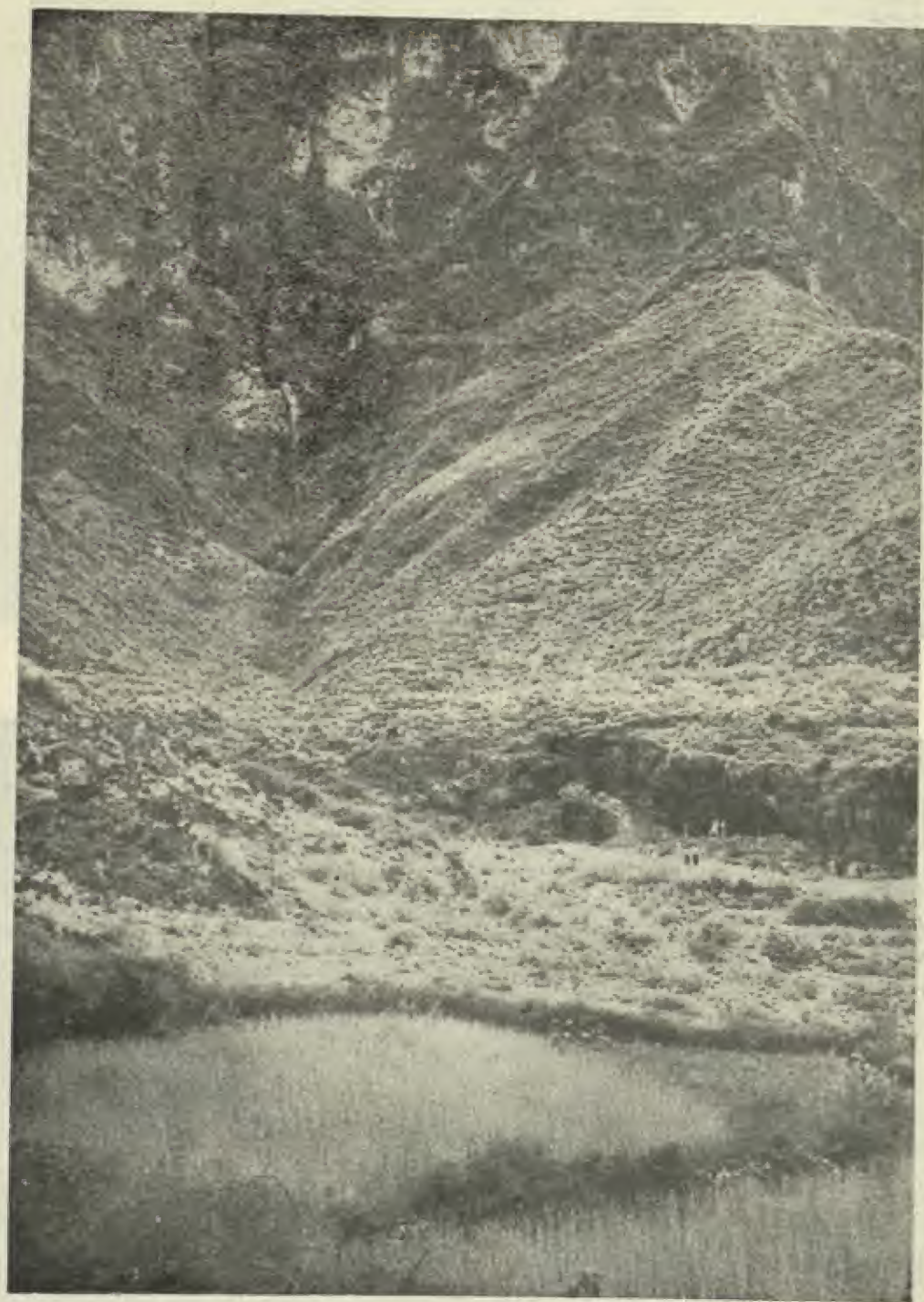
Pl. II — Sanghao Village seen from Machizai, Khandao in the Background



Pl. III a — Sanghao-The village tank filled with water from the hill springs by pipe lines



P. III b—Sanghao - Old water channel



Pl IV — Parkho-darra Cave on one side and the water catchment
from the spring at the joint of the hills above



Pl. Va - Sanghao - Terraced fields on the hill slopes



Pl. Vb - Sanghao - Diaper masonry used in the terraced fields



Pl. VI a — Sanghao - Three canyons (1) Rod, (2) Parkho-darra, (3) Bagh-darra



Pl. VI b — Bedrock lying at an angle



Pl. VII a — Rod, General view



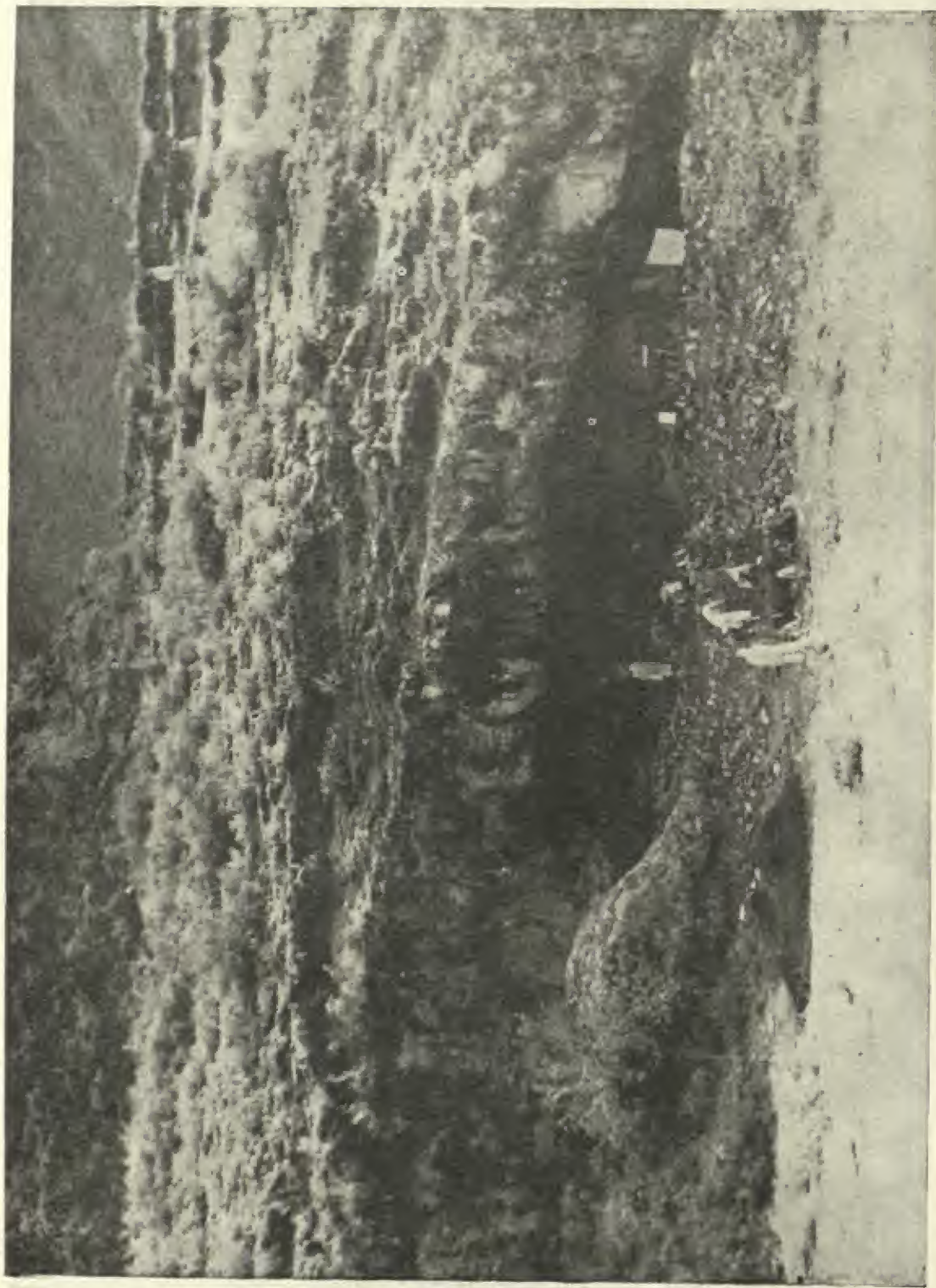
Pl. VII b — Sanghao - Small Cave in Rod



Pl. VIII a — Rod, Buddhist ruins



Pl. VIII b — Rod, Buddhist ruins on top of a cave



Pl. IX — Sanghao — Parkho-darra cave under excavation, huge rock fall in front



Pl. X — Parkho-darra Cave showing hollows on the face after rock fall



Pl. XI a — Sanghao — Black Soot in the ceiling of the cave



Pl. XI b — Sanghao — Big boulder fallen in the cave



Pl. XII a — Sanghao Cracks in the Conglomerate near the Parkho-darra Cave



Pl. XII b — Parkho-darra — Small cave to the west of the main one



Pl. XIII a — Sanghao - Bushes in the pitched ramp



Pl. XIII b — Sanghao - Stone Pitching in the Cave



Pl. XIV a — Sanghao - The demarcation of the trench in Parkho-darra Cave



Pl. XIV b — Sanghao - Parkho-darra Cave Excavation in Progress



Pl. XV a — Parkho-darra Cave - Modern Skull surrounded by stones in the alluvium



PL. XV b — Parkho-darra Cave. The Cave bottom being cleaned



Pl. XVI b — Parkhao-darra Cave - Back Rock of the Cave being cleaned



Pl. XVI — Parkho-darra cave - Stone lined pit being cleaned



Pl. XVII — Parkho-darra Cave. 15 deep trench

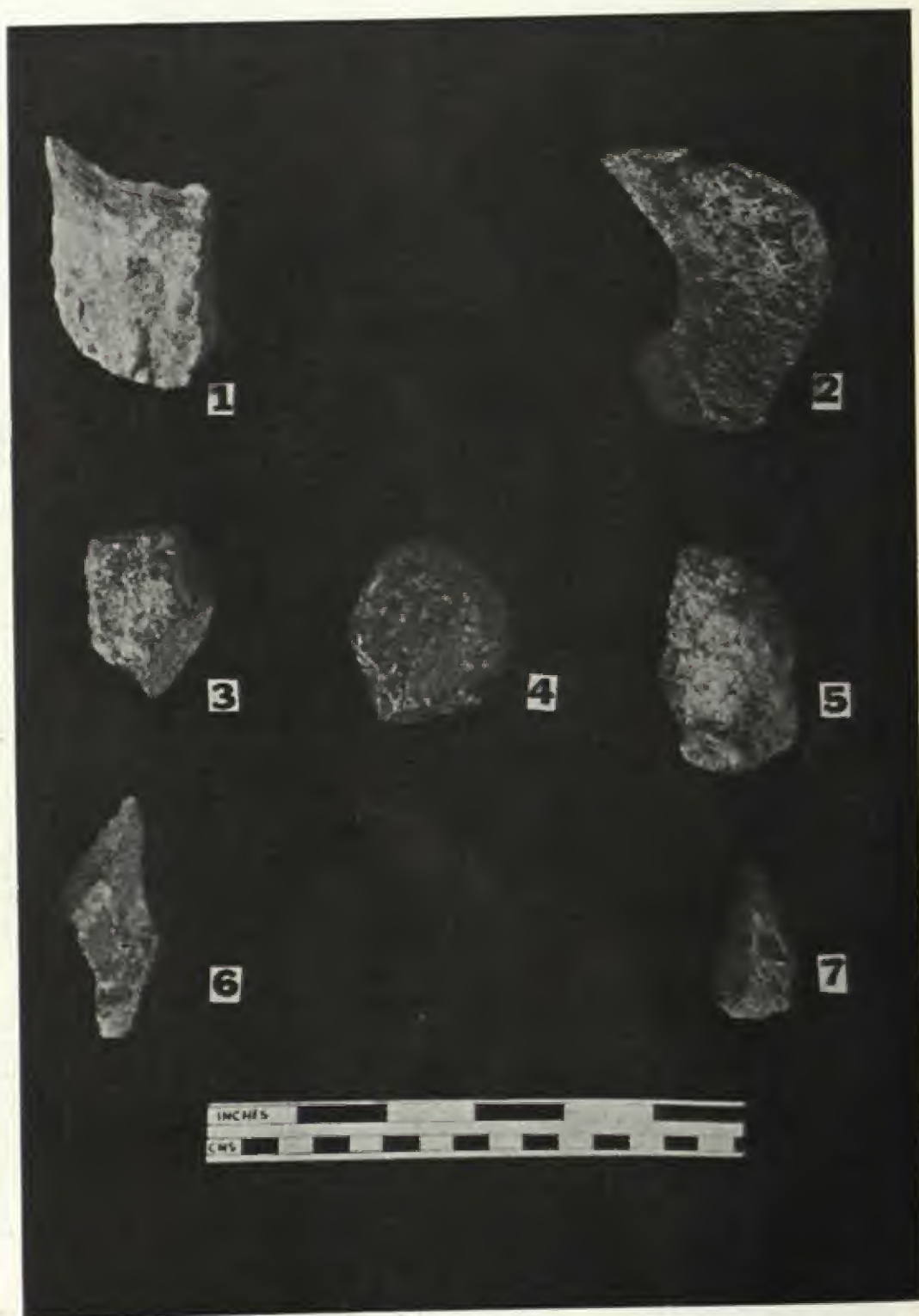


Pl. XVIII — Parkho-darra Cave. - Side-view of the trench.

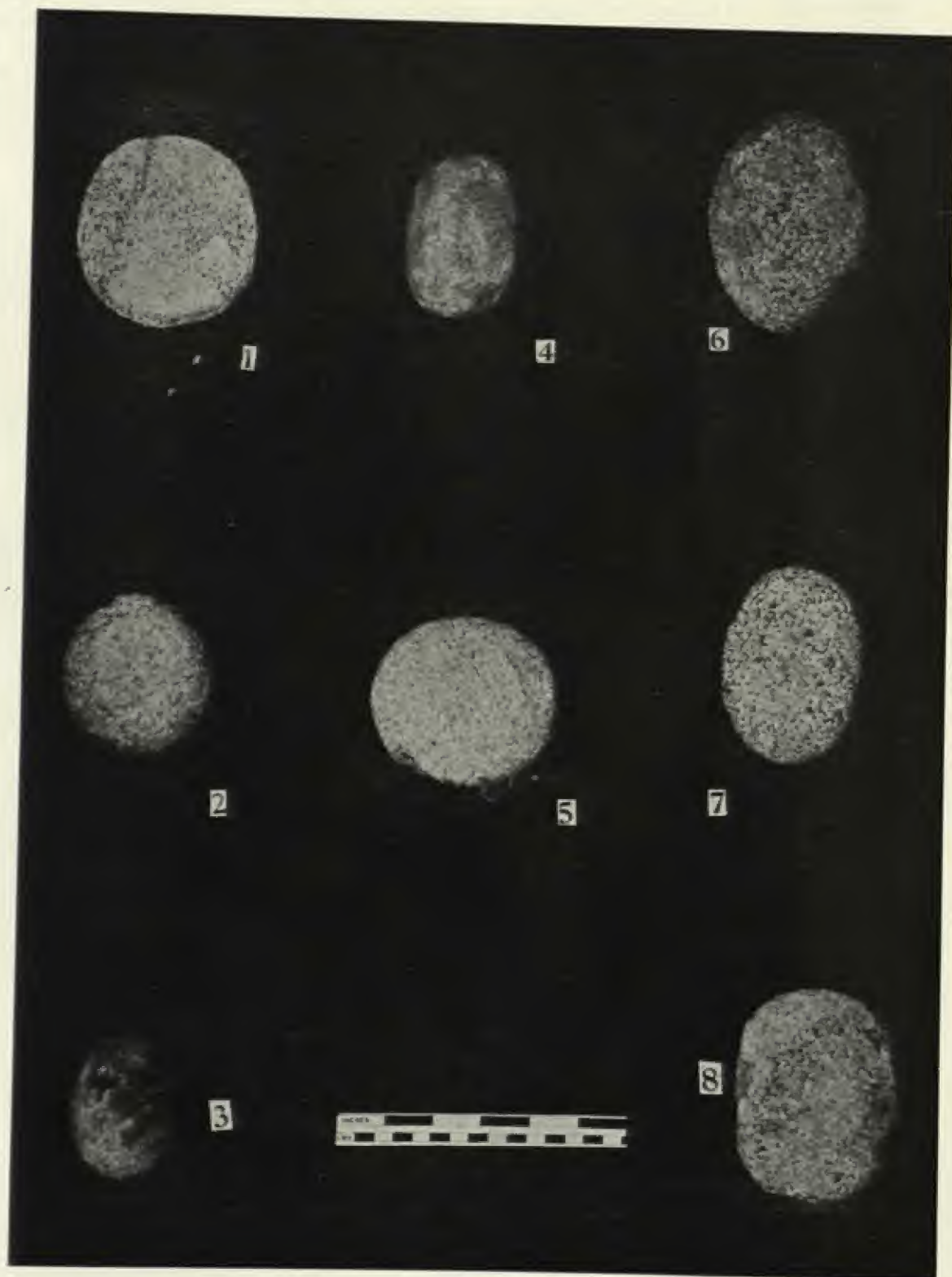


Pl. XIX a — Parkho-darra Cave - Line dividing the layers inside and outside the Cave

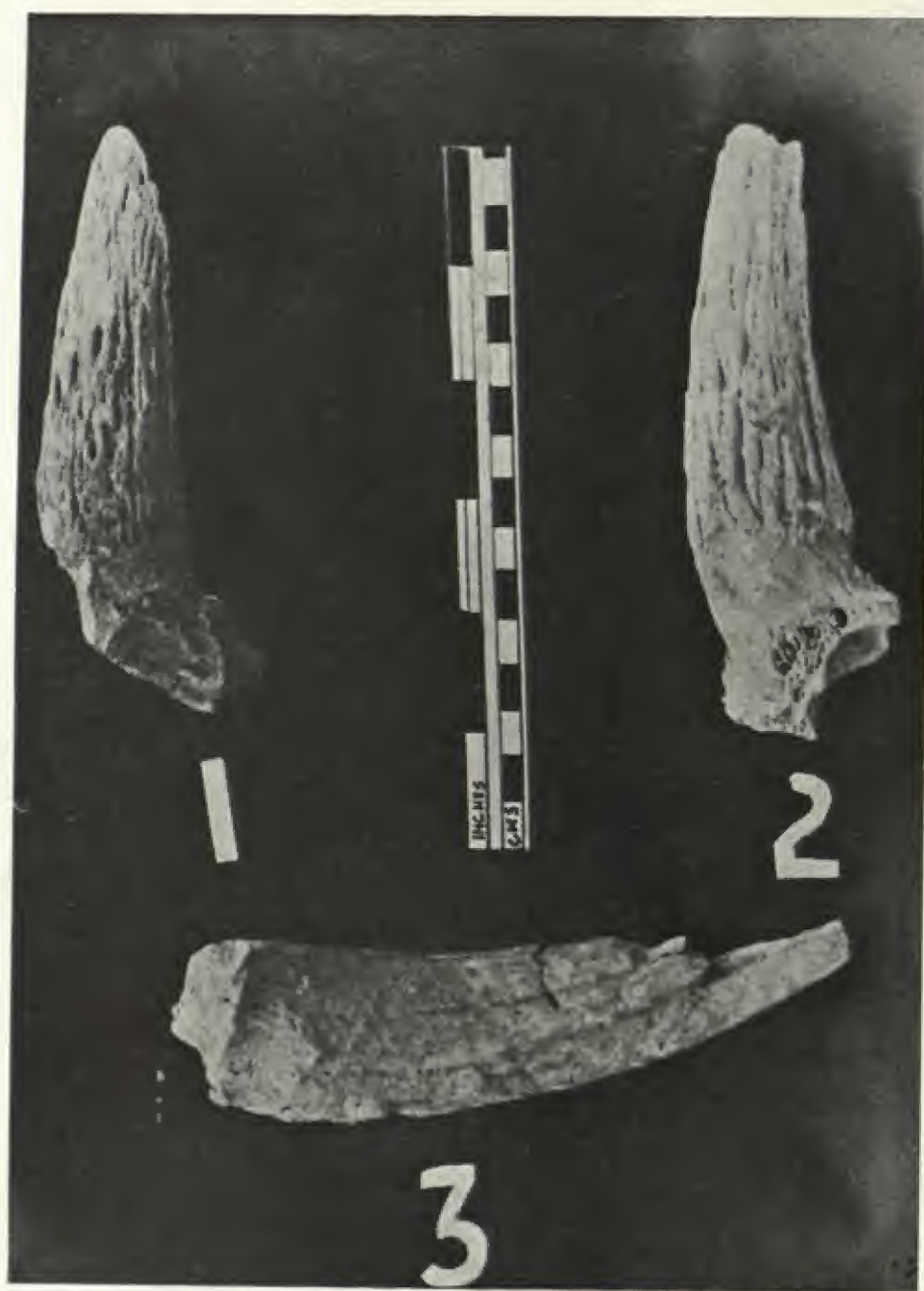




Pl. XX - Schist Tools recovered from the cave 1, 2, 3, 6 and 7 Points; 4 and 5 scrapers



Pl. XXI — Hammerstones of granite recovered from the cave



Pl. XXIJ — Parkho Dara Cave Horns from the excavation.

ting that almost all the quartz was derived from non-lateritized quarries. The period ended with the sudden fall of the cemented boulder from the ceiling. It overlay greater portion of layer 10 and made up layer 9 of period II. The reason for the fall of the cemented boulder may be concealed in some climatic change. One remarkable change is that after this period the red-stained clay makes up the layers of period II, which must have been derived from the red-staining of the upper part of the Younger Loess. It is because of this that almost all the tools in the subsequent periods were red-stained.

It is on the top of these boulders that the men of period II settled. It seems that after the fall of the boulders the cave was given up for sometime, or at least the occupation was rather very casual. In fact the bottom of layer 9 revealed no tools at all. But the occupation of the cave continued through all the layers of period II, each layer being separated by a charcoal line. All the layers dip down (Pl. X, X a and b) away from the back of the rock and with them are mixed up several patches of ash and charcoal. The quartz tools are red-stained, though very few at the bottom are of white quartz. Other materials include schist fragments, animal teeth and fractured bones, some being charred. Period II also saw slight sliding of the rock (not shown in the section) from the back of the cave, though this did not lead to actual desertion of the cave.

Period III is a continuation of the stone age material seen earlier, and shows regular occupation with plenty of material in the deposit. Layers consist of reddish clay mixed with good many fragments of limestone. There was also a streak of charcoal lining separating layer 4 from layer 3, and quite an amount of ash was noticed in layer 4. Some of the rubbish ash and charcoal was thrown outside, thus turning the clayey stuff black. The red clay appears to have been derived from the red-stained clay outside. The quartz tools were again red-stained. Other objects found include three animal horns in trench D layer 4 A, hammerstones of granite in trench D layer 4A, bone fragments, animal teeth and tools made of schist.

The next period IV makes a complete break in the material remains. In this period no regular occupation was observed in the cave, but several pits were found, some of them lined with stones (Pl. XVI a)—all full of ash, charcoal, bones and pot-sherds. One large pit was dug just behind the embankment. The rubbish from these pits were thrown outside making layer 2A of black ashy earth. Some of the stone-lined pits appear to make up hearth. It seems that the cave was used for cooking purposes by the occupiers. Such hearths were also noticed in the lower periods as well. The date of this period is determined by the following:

- (i) The find of one copper coin of Kanishka showing the great king in the standing pose on the obverse and giva and bull on the reverse.
- (ii) One fragment of a local black polished ware.
- (iii) Rim fragments of a miscellaneous sort and pieces of drinking vessel—all of the Kushana period (See Fig. 25).

On these material evidences period IV is dated from circa 2nd century B.C. to 2nd century A.D. Pitched embankment partly falls in this period. It is this period which has been earlier termed "Buddhist". These Buddhists disturbed the earlier

layers in this cave as also in other caves seen in this area. The result of this disturbance, caused by digging holes and pits, mixed up the deposit of the earlier period, and it was very difficult to detect a break between the earlier occupation and the Buddhist period. But wherever it was preserved, it was clearly noticed that an earlier occupation was characterised by whitish clay mixed up with reddish soil. Whenever the clods of this clay were broken, invariably came the fragments of quartz. It is, therefore, reasonable to infer that there was a definite break between period III and period IV.

The topmost occupation period was that of the Buddhists inside the cave. But outside the cave immediately below the ploughed soil there was an interregnum of river-laid alluvium, layer 1A, preceded by a sandy layer, 1B. In this deposit were also recovered some pottery fragments derived from earlier occupation. A pit was encountered in trench E, in which a fragment of a skull (Pl. XV a), lined in a circle of gravels, was found. The pit was dug right from the top proving that the burial was of recent date. This entire deposit has been referred to period V. The layers of this period merge in the pitched embankment suggesting that they are partly coeval with it.

EXCAVATED MATERIALS

Stone Tools.

Stone tools found in actual excavation can be broadly divided into three groups:

1. Considerable number of tools of the "flake-blade-and-scraper" type along with cores and numerous waste fragments in three materials: (i) Opaque variety of white or red-stained quartz is the usual material, (ii) a limited examples of transparent crystal but very fragile, and (iii) only two specimens in chert. It appears that this last material was not available to the cave man. Hence one specimen is re-used again and again.

2. Crude fragments of schist⁷, some of which approach tools of the first group, but a few are unique in this material. They are found in all the levels.

3. River-rolled hammerstones of granite found only in trench D layer 4A, and thus belong to period III.

1. Quartz Tools

Quartz, the most intractable raw material that has been used by the Sanghao Cave man, as it was locally available, makes the preparation of the tools as well as their study most difficult. The material is fragile and the flakes do not make a clean cut. It is very difficult to get a real conchoidal fracture in this quartz. The bulb of percussion is occasionally diffused in the tools. Even the lines of striations are observed with great difficulty. But given this raw material in plenty the

7. Col. D. H. Gordon calls the material "black indurated shale" in *Prehistoric Background of Indian Culture*, Bombay, 1958, p. 19.

Sanghao man had no other choice, and we have to discover the techniques in this raw material and understand technical affiliations with other cultures.

The entire tool complex of Sanghao from period I to III represents a homogeneous technical tradition and follows the same technique throughout. The varieties of tool types diminish in period II, but in period III again they catch up with those seen in period I. The fundamental difference is that in period III the size of the tools is generally smaller than that in period I.

There is plenty of evidence to show that the Sanghao man actually quarried quartz from the local outcrops and brought it into the cave, and here he made tools. Large number of waste fragments scattered in the cave and in the rubbish deposit outside bear testimony to this fact. What the actual process was in making the tools is a question of inference. Dr. B. Allchin⁸ refers to a method employed by the Andaman Islanders in tackling quartz. "They are reported to have fractured quartz pebbles by placing them in the fire until they were red hot, and then removing them and striking them immediately with another stone. In this way the quartz could be shattered into small sharp fragments." But at Sanghao no quartz pebbles were used as raw material. The evidence shows that actual quartz nodules were brought from the quarries only a few hundred feet away into the cave and tools made here. It is quite possible that here again the nodules were heated before striking, but nothing of the sort can be inferred from the tools. Though charcoal and ash as well as the evidence of hearth are known in the excavation, still it appears that they were more used for cooking than for the manufacture of tools. The evidence of charred bones from the excavation goes to support this inference.

The Sanghao tool complex is predominantly a flake industry though a small proportion of core tools is also present in it. The tools show a technical tradition which comes closest to the Levallois-Mousterian flaking technique of Europe and Western Asia. In terms of Indo-Pakistan prehistory it is referable to the Middle Stone Age industry as the following analysis will show. (See also below under comparison and conclusion). No statistical calculation of the tools is given in this report as the excavation is still incomplete. However, a preliminary account of the main types and varieties of the tools is included here so as to give an idea of the main industry associated with these cave dwellers. The industry may be divided into two sub-groups: A. Core tools, and B. Flake and blade tools.

A. Core Tools

Broadly speaking there are four varieties of core tools so far detected in the excavation: (i) Discoidal cores, (ii) Tortoise cores, (iii) "Fluted cores", and (iv) unrecognizable cores which have been so much flaked that at the end they are thrown as waste materials. The last variety was the greatest in number probably because of the very nature of the raw material. They have not been illustrated here. All the other three varieties show careful preparation of the striking platform, some of them being unifaceted as in variety (iii) and others being multifaceted. The cores are further worked to produce edged tools of different varieties

8. 'The Indian Stone Age Sequence', in *Journal of the Royal Anthropological Institute*, Vol. 93, 1963 p. 221.

mainly reduceable into (a) discoids, (b) chopping tools or probably small hand-axes. The latter are of two sub-varieties—one group has a clean platform on the top and the other has a narrow rough end. And (c) scrapers. Long blade flakes appear to have been struck from fluted cores, but their number is few. The greatest number of scrapers is produced from tortoise cores. It is from them that we also get triangular points. Many small varieties of points are struck from discoidal cores in the process of making other tools. By striking away one side of these cores (See Fig. 10. nos. 1-2&3) we get one variety of tools which may be used either as chopping tools or more preferably as scrapers. From tortoise cores we get another variety (Fig. 9, nos. 2 and 3), which may be included among semi-circular scrapers—a type which appears to be a predecessor of the crescents or lunates of the microlithic period.

(i) *Discoidal cores:-*

- (a) Fig. 7 no. 1. A discoid of red stained quartz worked on both faces into a rough round shape. Marks of use at the edge. Trench B layer 3.

- (b) Fig. 8 no. 1 — chopping tool or handaxe, slightly red-stained, has a platform at the top end. The other end is worked into a cutting edge, worked bifacially. It belongs to the first sub-variety. Trench D layer 4 A.

Fig. 8 No. 2 — chopper, has a single platform at the top end. Long flakes taken out from both the faces and then the edges retouched. The working end is slightly pointed, red-stained, belongs to the first sub-variety. Trench A, layer 11.

Fig. 8 No. 3 — chopping tool or handaxe with a platform at the top end, rectangular in section. one face shows a single flake struck from the platform but the other has a subsidiary flake removed from the lower half, thus producing an almost “bivelled” edge. It belongs to the first sub-variety. The term “bivelled” used here is not very satisfactory as it is a late technique seen in the neolithic tools of Eastern Asia.⁹ The idea here is to describe a secondary flaking with a single snap worked from the lower half of the body towards the cutting edge in the process of sharpening. This is seen in a number of tools at Sanghao. It is only in this limited sense that the term “bivelled” is used here.

Fig. 7 No. 2 — handaxe with the top end narrow, secondary flaking on the body to produce the edge, red-stained. It belongs to the second sub-variety. Trench C layer 3.

Fig. 7 No. 3 — handaxe retaining the platform at the top end, secondary flaking on the body, red-stained. It belongs to the second sub-variety. Trench B layer 3.

Fig. 7 No. 4 — smaller variety of handaxe, much worked on the body, red-stained. It belongs to the second sub-variety. Trench B layer 3.

- (c) Fig. 9 No. 1 — scraper, almost semi-circular with a flat top. The edge is produced by secondary working. Trench B layer 11.

9. A. H. Dani: *Prehistory and Protohistory of Eastern India*, Calcutta, 1960, p. 47.

Fig. 9 No. 2 — smallest variety of the above, red-stained, Trench D layer 7A.

Fig. 9 No. 3 — medium sized variety of the above. Trench A layer 12.

Fig. 9 No. 4 — scraper, slightly longish in shape, red-stained, much worked on the body. Trench B layer 3.

(ii) *Tortoise Cores.*

(b) Fig. 10 No. 1 — core showing multi-faceted platform. red-stained. Trench B layer 3.

Fig. 10, No. 2 — smaller variety of the above, red-stained. Trench B layer 3.

(iii) *Fluted Core.*

Fig. 10, No. 3 — A fluted core with a platform on the top, and flakes struck longitudinally. The underface is broken. It is because of this break that it looks like a tortoise core, but the other face which is rounded shows clear long flake scars. For this reason alone it is termed fluted core. Trench A layer 11.

B. Flake and blade-flake tools

The flake tools, as pointed out above, are a miscellaneous assortment particularly because quartz does not give good flakes. In the course of flaking or trimming the core many waste products are found as a natural outcome. All these waste products are not completely abandoned. The use marks on many of them indicate that they were actually used but the manner of their use is difficult to determine. It is particularly difficult to resolve them into one or the other typical shape. They may be called freaks. The flake scar on them is not at all clear. They might have been used as scrapers or points. These have not been illustrated at all.

There is quite a good number of tools on which deliberate flaking is writ large. All the flakes are struck from a prepared core by a single blow with the result that the lower face generally shows one clean cut though the bulb of percussion is sometimes diffused. The flakes thus removed are then taken up for further working. The first flake scar forms the underside of the tool and the secondary flakes are removed from the upper face. In the case of broad scrapers a single blow from the middle of the body towards the cutting edge or a longitudinal flake across the body produces a joint at the cutting edge. Sometimes two or three flakes are struck from the upper face to the same end. In the case of side scrapers sometimes a fine strip is taken out to produce the working edge. In a few cases notches are seen at the lower end for purposes of hafting, and in some the back is blunted by transverse flaking.

There is a good number of tools which cannot be included under the category of scrapers as they do not show clear scraping edge, though they are produced by

the same process. Their dominant character is the pointed end, though the point may be the result of freak. Such tools have been included under the term "points". Within this group have also been put awls, gravers and burins, which show an advanced technique of backward stroke from the point downward. This technique has not so far been noticed in trench D layer 7 A, but no definite conclusion can be drawn from this in view of the small area of the dig at the lowest depth. From period I onwards the technique is well evidenced. In the first case we get triangle or triangular points, particularly Fig. 16, No. 4 shows two long flakes produced by fine workmanship at the sides. In the other examples, Fig. 15, Nos. 4 and 5, notches are given either on one side or on both sides to produce the boring point. Still another, Fig. 14, No. 6, shows a clear backward stroke to produce the graver or burin. The largest number of gravers or burins are found in period I, and their number is reduced as we go upwards. This remark holds good on the basis of the present excavation only. Its correctness will be verified in the second season work. Some of the tools have long tangs, Fig. 14, No. 7; Fig. 12, No. 6; others have notches on one side, Fig. 12, Nos. 1-3; and still others have notches on both sides, Fig. 15, No. 6. We have also got triangles with a hollow base, Fig. 16, No. 7.

Thus the flake tools can be broadly classified under two main categories: (a) scrapers and (b) Points, the latter category including awls, gravers and burins. The scrapers include blade or blade-flakes and scraper-cum-points. Each of them can be further sub-divided into following sub-varieties:

(a) *Scrapers.*

- (i) Blade-flakes - These are almost parallel sided flakes struck from prepared cores (Fig. 13, No. 1). Some of these are further worked into points (Fig. 15, No. 7).
- (ii) Leaf-shaped scraper (Fig. 13, No. 2), which sometimes ends in a point. This particular tool has two platforms and the edge shows marks of use.
- (iii) Side-scrapers have several sub-varieties:
 - Straight-edged, Fig. 13, No. 7, with blunted back, the edge being produced by a thin flake strip removed from the side.
 - Convex edged, Fig. 13, Nos. 4 and 8, with the original platform serving as the blunted back.
 - Convex edge with a notch at the lower edge, Fig. 12, Nos. 1 and 2.
 - Hollow scraper, Fig. 20, No. 11, is concave on one side.
 - Double hollow scraper, Fig. 13, No. 6, the hollow being produced by secondary retouch.
 - Aslant edge scraper, Fig. 13, No. 5, the aslant edge being a by-product of the usual flaking. It is a freak.
- (iv) Notched scrapers show single (Fig. 12, Nos. 1-3) or double (Fig. 15, No. 6) notches at the lower end, the notches being produced by secondary retouch.

- (v) End scrapers either have narrow butt end and show the cutting edge on the other end produced by secondary flaking from the middle of the body (Fig. 14, No. 3), or are almost rhombos in shape (Fig. 14, No. 2). In these cases the original flake scar serves as the platform for the secondary flaking.
 - (vi) Fan-shaped scraper (Fig. 12) Nos. 4 and 5 shows a single flake scar on the lower face but has several flakes taken out from the other face. The name is derived from the shape.
 - (vii) Semi-circular scraper (Fig. 12, Nos. 7-9) has a single flake taken out from the lower face and number of longitudinal flakes from the other face. They are blunted. These are almost like latter day lunates but are bigger in size and do not show any retouch.
 - (viii) Discoids with almost circular edge but having a platform on the top (Fig. 24, No. 1).
 - (ix) Scraper-cum-points are found both in large and small sizes. Fig. 14, No. 4 has the point made by backward stroke.
 - (x) Tanged scraper (Fig. 12, No. 6) has almost straight cutting edge. It could as well be used as a transverse arrow head, if such a use was known.
- (b) *Points.*
- (i) Awls or borers with a single notch on one side only, Fig. 15, No. 1.
 - (ii) Awls or borers with a double notch on either side of the point, Fig. 15, Nos. 4 and 5.
 - (iii) Gravers or burins, Fig. 16, Nos. 1-3, are almost triangular in shape, each showing a backward stroke. We also have a long sub-variety (Fig. 14, Nos. 5 and 6) made on blade-flake.
 - (iv) Tanged point, Fig. 14, Nos. 7-8, No. 8 is of slightly-broader sub-variety.
 - (v) Triangular point—Fig. 16, No. 4 is a good example.
 - (vi) Notched point—Fig. 11, No. 5 shows two notches at the lower end but the point is very crude.
 - (vii) Triangular point with a hollow base, Fig. 16, No. 7. The point is produced by the junction of two flakes on the upper face.
 - (viii) Narrow point in period III produced by minute flaking in the upper face, Fig. 22, No. 1.
 - (ix) Rough and crude scraper-cum-points in period III, Fig. 23.
 - (x) Long point in a chert blade. Only one example in period III, heavily used, Fig. 21, No. 10.

some sort of a pointed end along with a few scrapers convince one that the cave dwellers, who were so short of good raw material, probably tried their hand in using this stone as well for their limited variety of tools. Whether we include them under the category of points or not, we must give them their due place in the life of the Sanghao man. Selected specimens are illustrated here and drawings of only two tools are given. In period I recognizable tools are few and far between, but good specimens come from periods II and III. Wherever recognizable, all such tools are made on flakes, if they can be called flakes. The clearest examples are illustrated in Fig. 24:—

No. 1—(Pl. XX, No. 4)—A scraper of schist found in trench A layer 7, almost round in shape but for the preparatory platform. It is struck from a prepared disc core by a single blow. Hence the lower face shows one clean cut and the platform is preserved on the top. From the upper face three longitudinal flakes are struck and then its lower half is trimmed by secondary working to produce the scraping edge. The flake scars are so clear that no one can doubt the genuineness of the tool. This is the most convincing example.

No. 2 (Pl. XX, No. 3, upside down in the photograph)—scraper-cum-point, found in the cave, trench A layer 7. A single rough flake scar on the lower face struck from a prepared core. The upper face shows flakes taken out from the sides, and the point is made by the convergence of two flakes leaving a ridge in the middle.

Pl. XX, No. 1—Scraper-cum-point. The scraping edge is concave at the top, produced by secondary flaking. The sides show further flaking. The shape is a freak. Trench B layer 11.

Pl. XX, No. 2—A point of almost crescentic shape with notches at the lower end. The shape and the point are both worked by secondary working at the sides. Trench A layer 7.

Pl. XX, No. 5—A flake almost triangular in shape. Trench D layer 7 A.

Pl. XX, No. 6—A tanged point of peculiar shape. The point is produced by the convergence of two flakes meeting on a ridge in the middle. Trench B layer 11.

Pl. XX, No. 7—A point showing a single flake scar on the lower face and two flake scars meeting on a ridge. Trench A layer 6.

The techniques followed in the case of these schist tools appear to be the same as in the case of the quartz. The preparation of the core is also evidenced by them. The points and the edges are also made by secondary working. Only in one tool fine workmanship is attested (Fig. 24, No. 1). The selection of this poor raw material is difficult to account.

3. Hammerstones and anvils (Pl. XXI)

One dozen hammerstones were found with three pieces of horns (Pl. XXII) in trench D layer 4 A. All the stones are river-rolled pebbles of granite—a variety

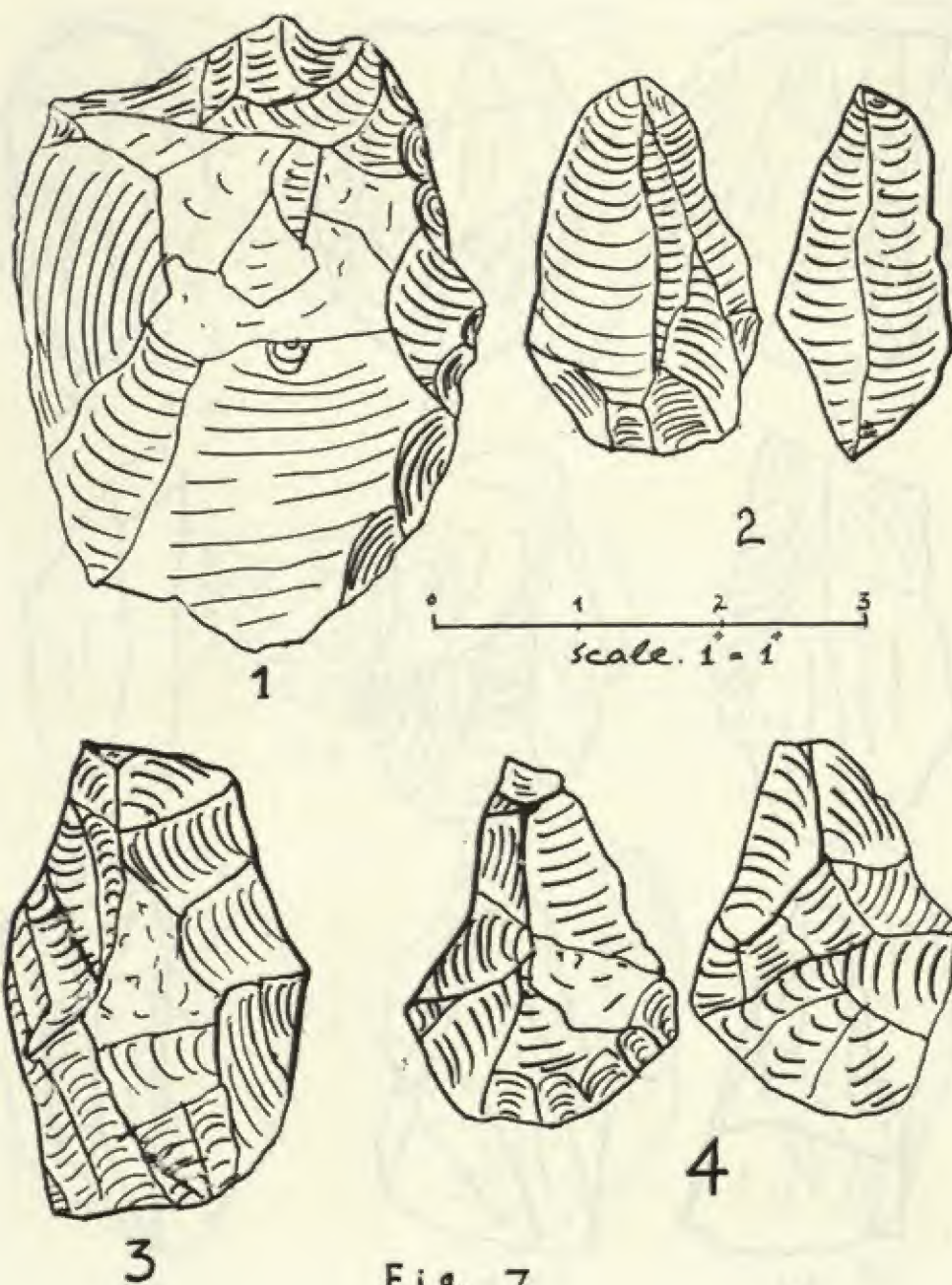


Fig. 7

DANI

(ANCIENT PAKISTAN)

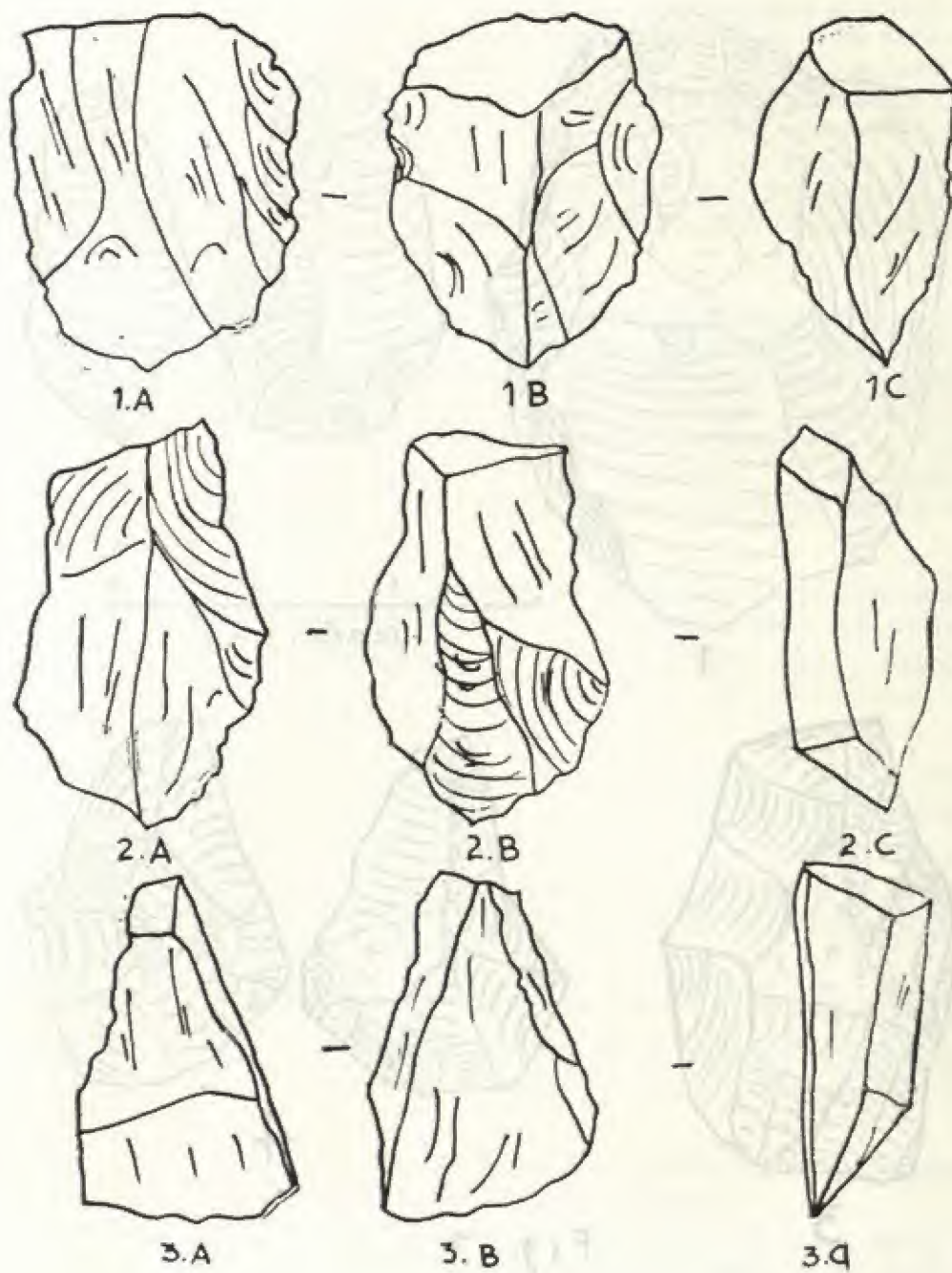


Fig. 8

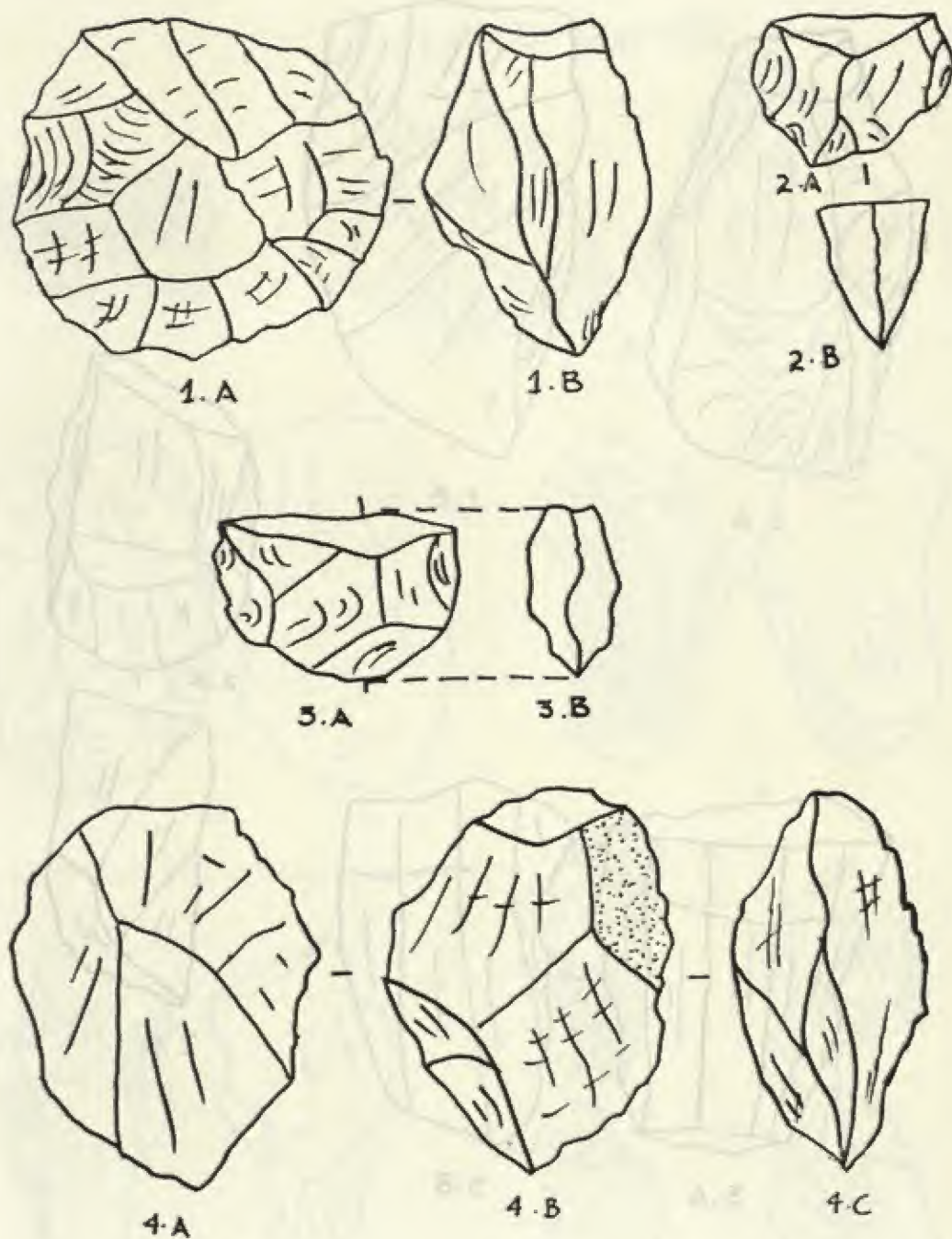


Fig. 9



1.A



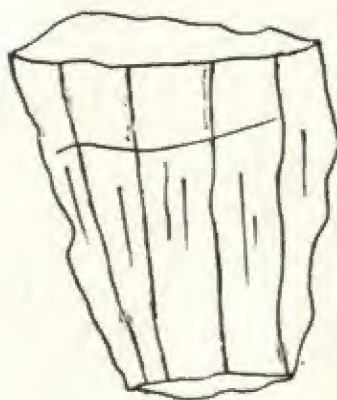
1.B



2.A



2.B



3.A



3.B

Fig. 10

Trench D Layer 7A

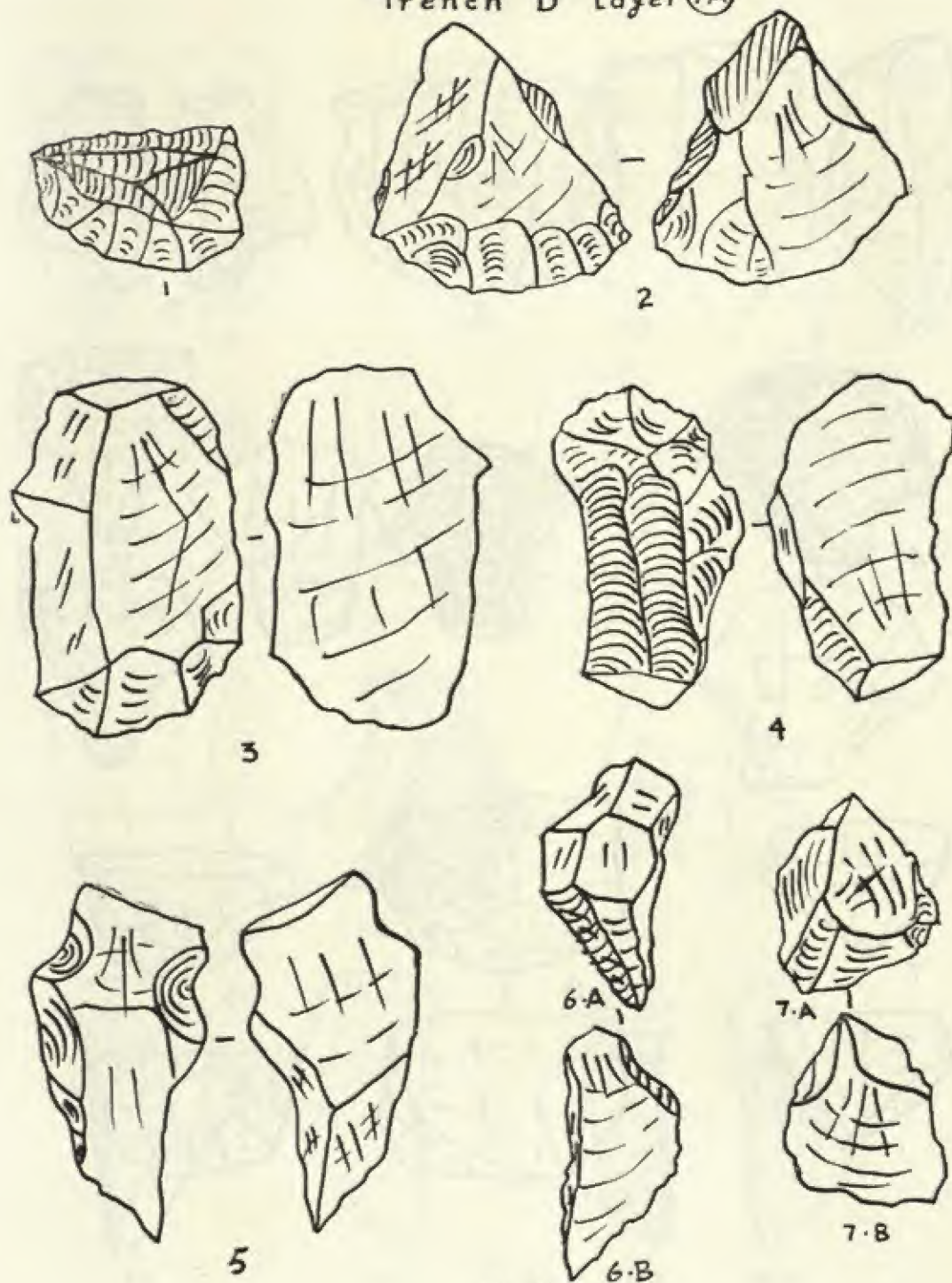


Fig. 11

Period I

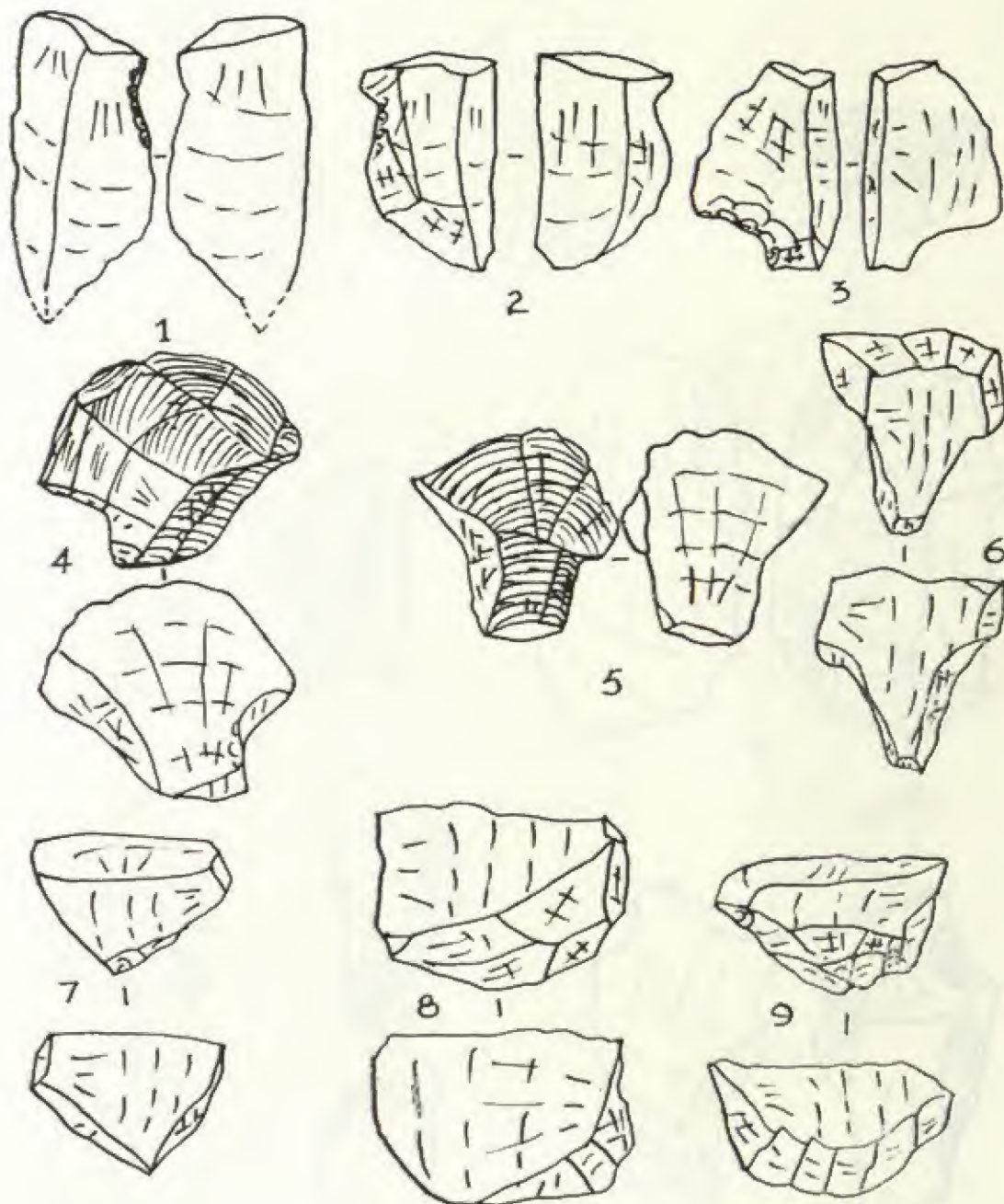


Fig. 92

Period. I



Fig. 13

Period I

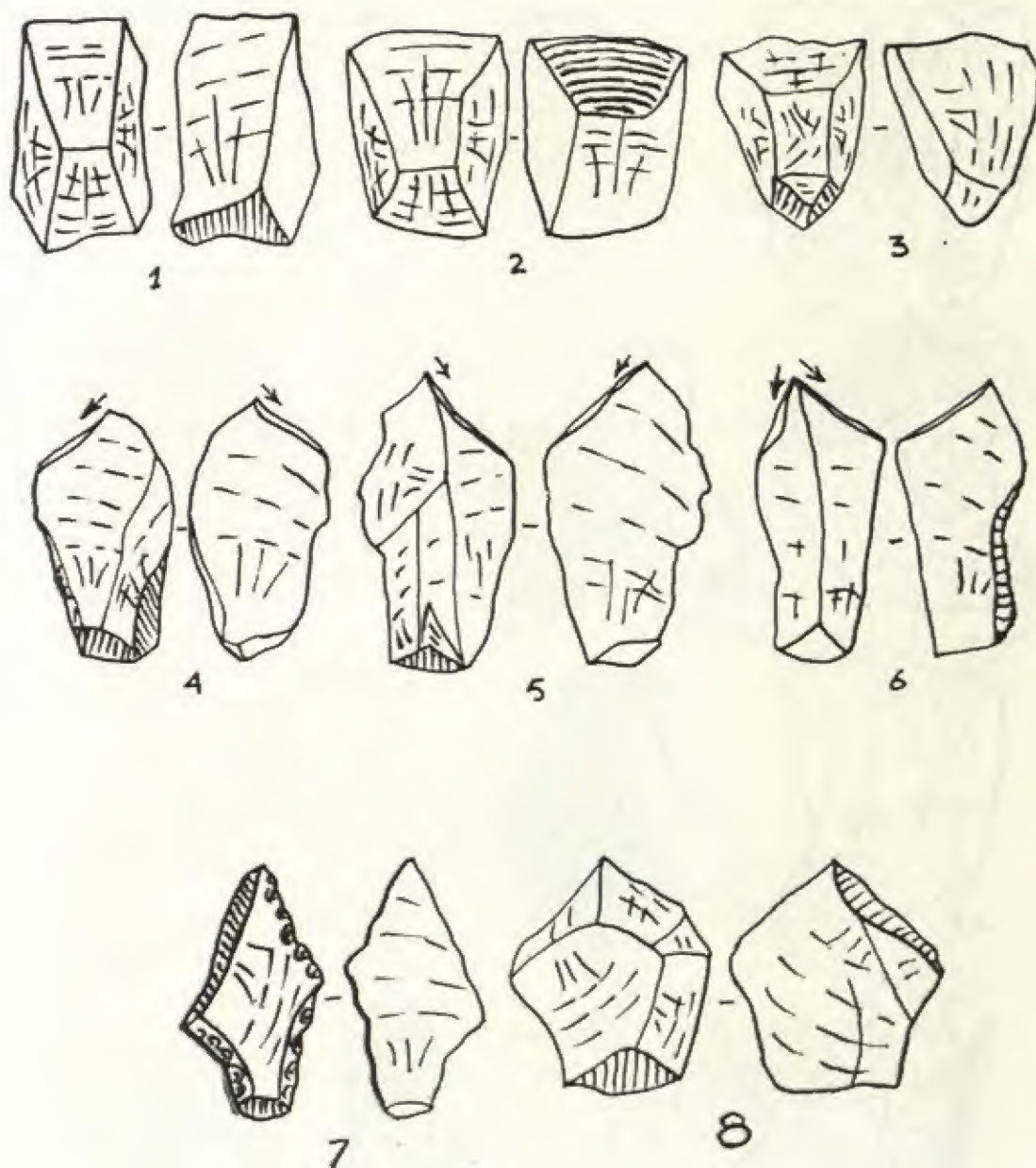


Fig. 14

Period I



Fig. 15

Period I



Fig. 16

Period II



Fig. 17

Period II



Fig. 18

Period III



Fig. 19

Period III

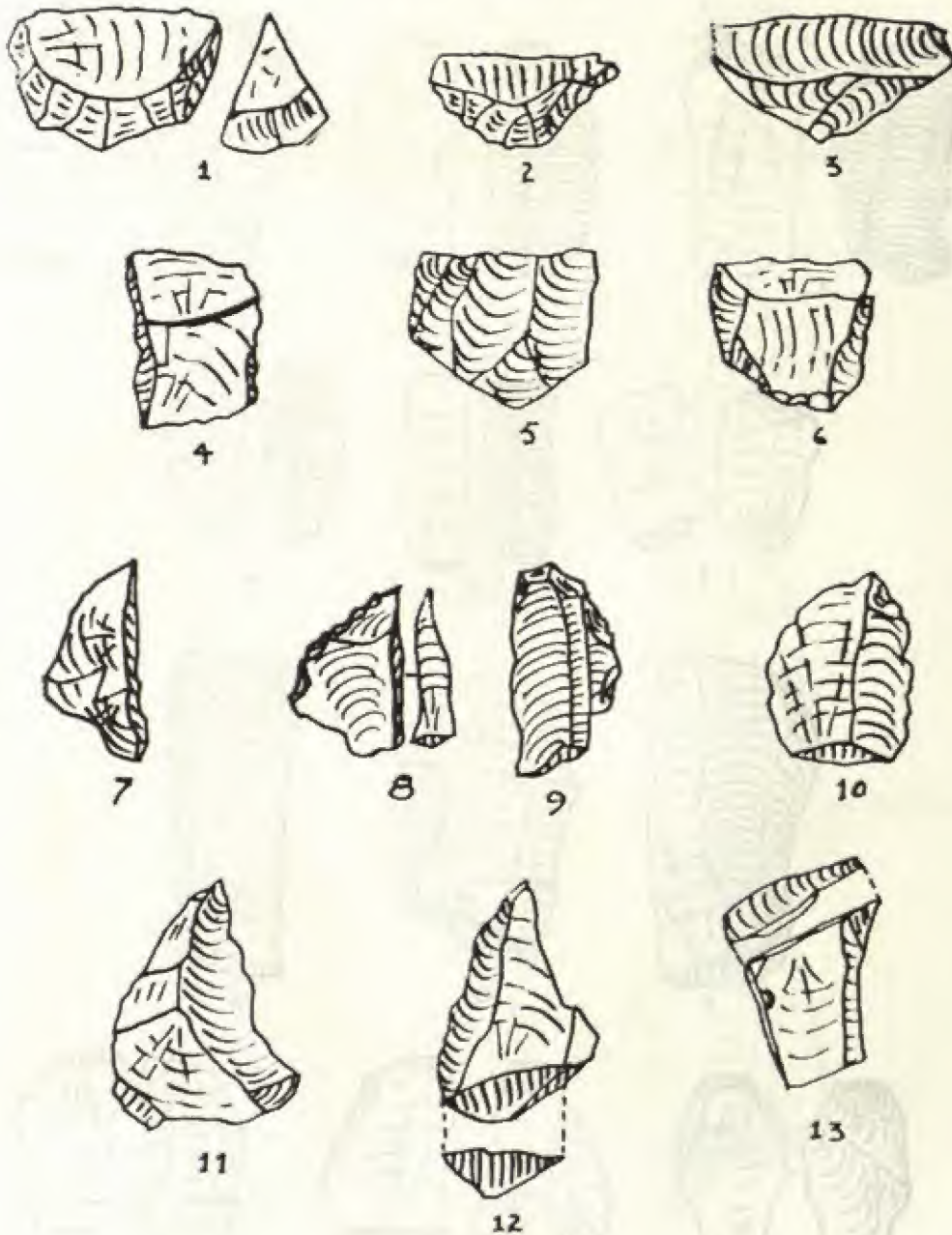


fig. 20



Fig. 21

Period III

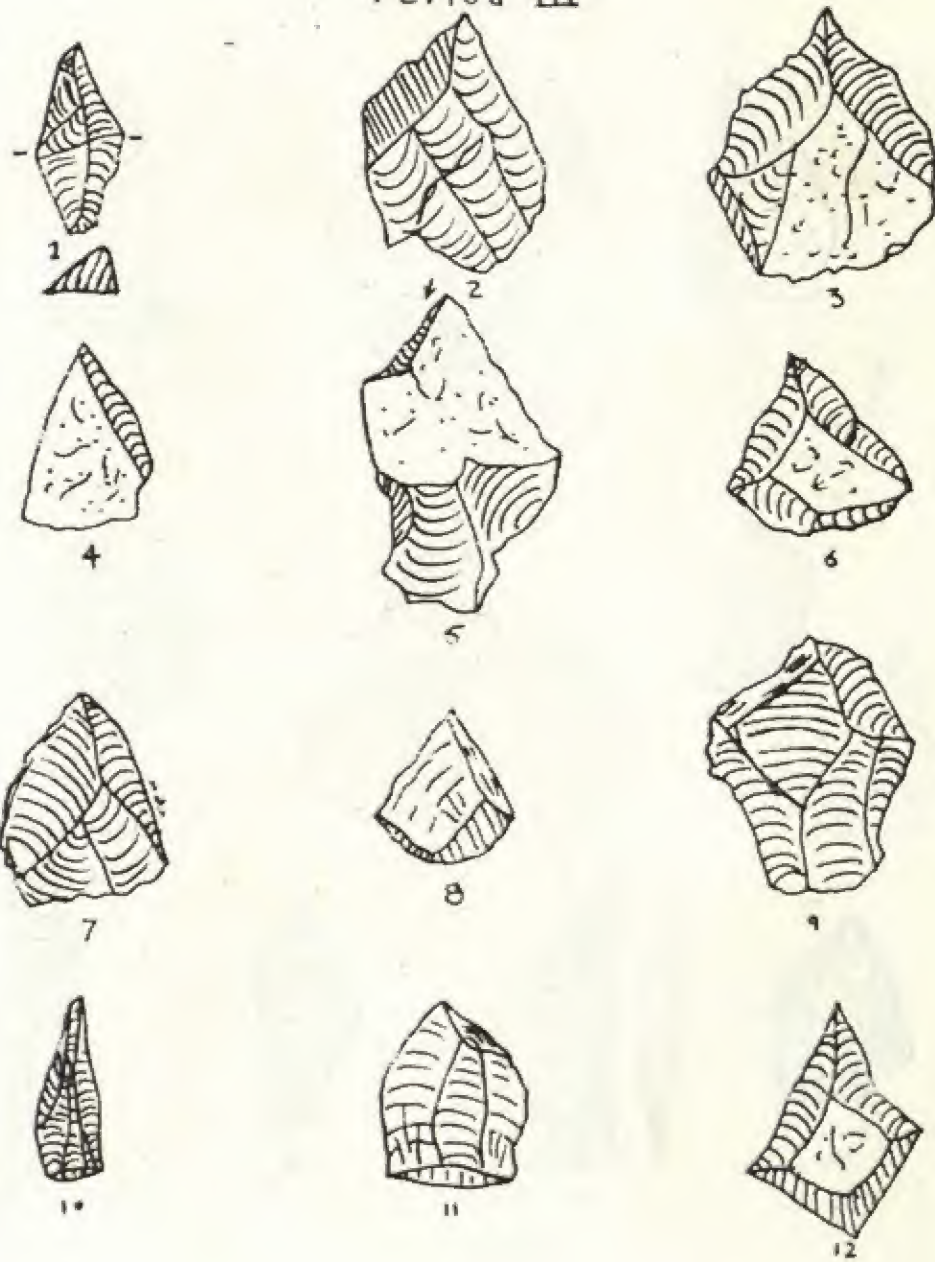


Fig. 22

Period III

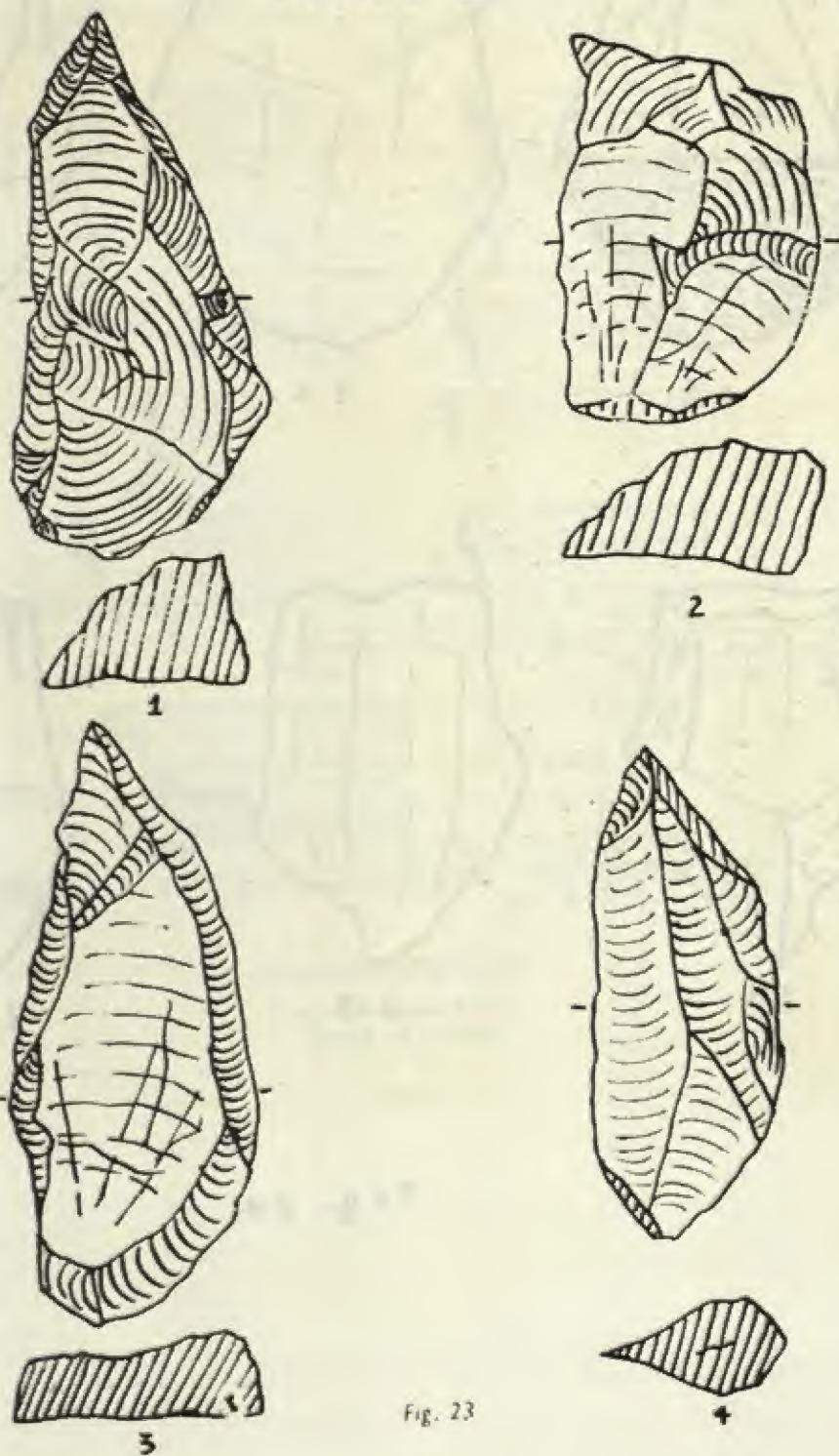
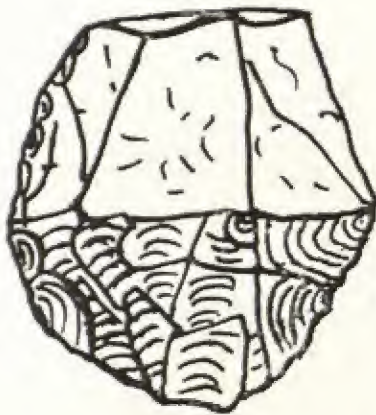


Fig. 23

DANI

(ANCIENT PAKISTAN)



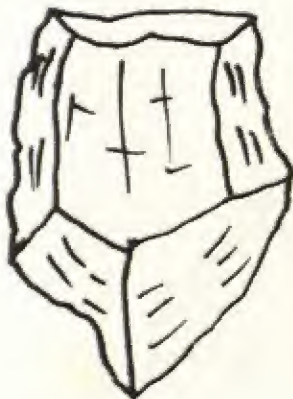
1.A



1.B



1.C



2.A

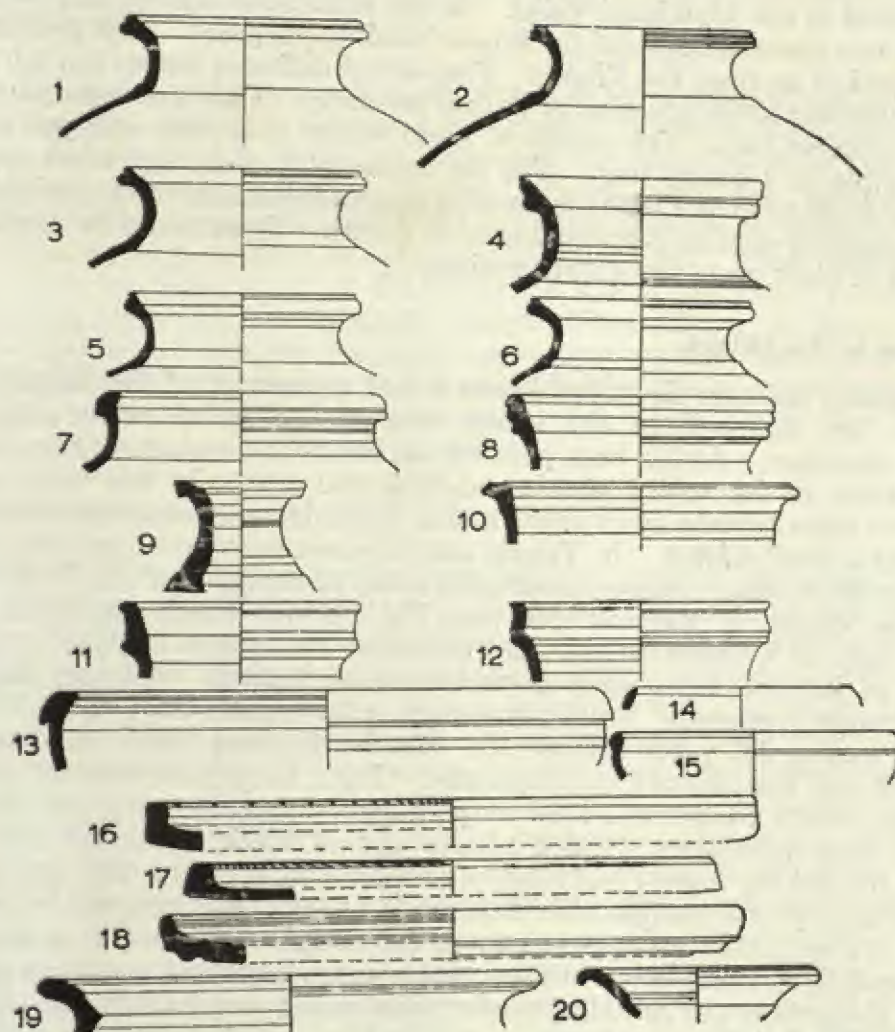


2.B



2.C

Fig. 24



SANGHAO POTTERY



Scale of inches

1" = 1"

Fig. 22

of stone found in the Malakand ridge. In the Malakand Agency and Swat state even today this stone is quarried for house building purposes. The pebbles must have been picked up from the *Khwar*. They are of different shapes but fall mainly into two varieties: either rounded or flat on two faces. Only one example (No. 5) makes a complete ball. The centre of these stones is crudely chipped and has either a dimple or a rough scar. The flat stones with the rough scars appear to have served as an anvil or a base for striking quartz flakes, and the round ones with a dimple could be used as hammerstones in a haft. These could be used for the application of blow on to the quartz nodules.

Distribution in Gandhara

The quartz industry described above is not a preserve of the Sanghao cave. Such tools are scattered in the loamy soil of the entire valley away from the recent alluvium. As has been pointed out before, no tools have been found in the excavation of the recent alluvium outside the cave. In this very valley in Rod canyon there are two more caves, and in Bagh-darra there are two small caves overlooking a small *Khwar*. In Tangai canyon some more caves are seen high up the main range of hills. About three miles away to the south of the Parkho-darra cave is the village of Babuzai (see map Fig. 1), over which stands the famous Buddhist cave of Kashmir-smast. On the lower range in a shallow trough-like formation of Babusar some more caves have been located. All over this region quartz flakes are scattered. Still farther south at Jamalgarhi Col. D.H. Gordon¹⁰ discovered a cave, 300 yards east of the Mardan-Katlang road. Unfortunately tools found near the cave are not illustrated. Later he gives further information: "The flakes, which are found on the sloping approach to the cave, are of opaque white and semi-translucent banded quartz and of black indurated shale. The quality of the flaking is poor but most of the material is coarse and makes rough tools. So far, up to a considerable distance, it has not been possible to trace any other site showing even an approximation (no longer true now) to a microlithic industry, and three more caves in this neighbourhood yielded no flakes at all; in fact up to the present the Jamalgarhi cave remains the only known microlithic site in the N.W.F.P." ¹¹ The cave has been revisited by us and the quartz tools collected from its vicinity. The tool types from this collection repeat those found in period III in the Sanghao cave. Gordon included them among the microlithic tools probably because he had no comparable material available to him. If his collection of tools is of the same nature as we have got, and there is no reason that there should be any difference, they could be easily associated with the Sanghao industry.

In between Jamalgarhi and Takht-bahi on the same Paja Hill, in an isolated hillock near the village of Katigarhi about 7 miles east of the main Mardan-Malakand road, three more caves have been located. They also produce the same kind of quartz tools. Across the Malakand Range similar quartz tools have been collected in the open fields at Thana, Chakdara and as far as Mingora in Swat state. A newly discovered rich site lies to the north of the town of Timargarha

10. It was first published by M.E. & D.H. Gordon in their article 'Survey of Ancient Gandhara' in *Journal of the Indian Anthropological Institute*.

11. D. H. Gordon—*Prehistoric Background of Indian Culture*, Bombay, 1958, p. 19.

in Dir state. All over this valley right up to Bajaur the quartz flakes are found in the open fields.

The distribution of these tools in the whole of the northern part of Gandhara clearly brings into view the general environment of these flake using people. They, no doubt, lived in the caves wherever they were available but they also hunted games in the small and narrow valleys, and they moved up and down these valleys across the hills and hill slopes in chase of smaller variety of games whose bones have been found in the Sanghao cave. Their location on the southern and northern sides of the Malakand Range suggests that these people migrated from the north into Peshawar valley. They appear to have moved in the same areas where later the Buddhists came and settled, and most probably they moved along the same routes. It is mainly in the track of the Buddhist ruins that we have been able to locate the prehistoric sites. It is hoped that the future search may widen the area of these people.

Comparison and Conclusion

It will be well to recapitulate the main features of the Sanghao industry before seeking comparisons. This industry is predominantly a flake and blade-flake industry, including mainly different varieties of scrapers, graters or burins and very rough kind of points made on either triangular flakes or blades. The flakes are struck from prepared cores, mainly tortoise and discoidal. The angle between the platform and the flake scar appears to be right angle. The faceted platform technique is well attested. The tendency towards triangular shapes clearly points to the Mousterian tradition. The triangles are again struck from the prepared cores and show convergent flaking with a tendency to leaving a central ridge. Though secondary flaking is attested, minute retouches are rarely observed. Notches are seen at the lower end of the tools for haft. Among the scrapers the knife blade and the leaf-shape are well-designed. There are quite a few local varieties, the most important being semi-circular scraper, fan-shaped scraper and rhombos-shaped scraper. The tendency from period I to period III is to reduce the size and to produce better worked tools but the bad quality of the raw material was a great hindrance. On the first look the period III tools show greater affinities, particularly in size, with the microliths. It is for this reason that Gordon called the Jamalgarhi tools microliths, and we also in our first notice¹² treated them under the same name. But the typology and the technique of the tools from top to bottom are so similar that period III tools may be a later survival of period I but following the same Mousterian tradition. As pointed out before (in the section of Excavation), there is definite evidence of some lapse of time between period I and periods II and III. However, the tools show one homogeneous tradition, and if we bear in mind the nature of the raw material, the tradition can be referred to the Levallois-Mousterian heritage.

The nearest comparable material comes from the other side of the Indus in the Potwar region, where flake tools were collected by the Yale-Cambridge

12. A. H. Dani, 'Prehistoric Pakistan' in *Journal of the University of Peshawar*, 1963.

team and now described by Mr. Paterson¹³ under the title "The Clacton Invasion". He makes two groups: Upper Clacton A and Upper Clacton B, and attributes them to the Upper Potwar Loess, which presumably is coeval with the Younger Loess of the Peshawar valley. The flake tools illustrated by him in his figures 42 and 43 can be easily matched from the Sanghao finds, with the only difference that at Sanghao retouch is very rarely seen. The convergent flaking, talked of by Paterson, is amply evidenced at Sanghao. Paterson calls this industry an intrusive element as he correctly distinguishes it from the upper Soan but in the past no such distinction was made. However, now with the discovery of a widely scattered zone in Gandhara where this industry is attested, its source is easy to determine.

Further west in Afghanistan the Italian Archaeological Mission through its representative, Prof. Salvatore M. Puglisi¹⁴, has been able to locate open air sites at Hazar—Sum (Samangan). He writes: "Human presence even during the interstadial stages of the last glaciation is not to be excluded — the scattered implements of a Levallois and Mousterian technique are here significant. The lack of Gravettian may be equally indicative of a particular climatic-environmental situation. Local industry mainly reflects the clactonian technique: large flakes (used for various purposes) as well as medium and small-sized ones, and laminar flakes (usually thick) are all evident. In nearly all these implements the large bulb of percussion may be noted with the typical, slight, radial fissures. The angle formed between the flake surface and the striking platform is normally obtuse. These implements have no definite shape; their edges reveal clear, vigorous retouches that sometimes form denticulation. Along some edges inverse retouches have been obtained. A number of pointed-carinated type are noteworthy as well as some implements with retouched concavities which bespeak the use of bone and wood for the making of sharp weapons, and a few big flakes with straight edges or pointed ends with large retouches for use as handaxes or cleavers. The biggest series of implements is made up of side-scrapers, discoidal scrapers, knives, and a few pointed flake-tools." Though the tool types of this region follow the same Mousterian tradition, they are much better and finer than the Sanghao examples because the main material used here is flint. If we can concede this change due to the change of the material, the Sanghao industry, in spite of the local varieties, can be attributed to the same Mousterian tradition.

If this change in material resulting in better workmanship is kept in mind, it is not difficult to find parallels in the tool types of Sanghao and in the tools found in the caves of Iraqi Kurdistan¹⁵ and Iran¹⁶. Particularly the triangular points and scrapers illustrated by Braidwood on his plate 25 have close similarities with the Sanghao implements. The Mousterian technical tradition in the two areas are further strengthened by cave dwelling and change in the living condition — a change from the stage of food gathering to that of "food collection" — a natural outcome from the habit of living in closed small valleys. This is partly due to

13. T. T. Paterson and H. J. H. Drummond, *Soan the Palaeolithic Pakistan*, Karachi, 1961 chapter IX.

14. See his 'Preliminary Report on the Researches at Hazar Sum (Samangan)' in *East and West* (New Series, Vol. 14' Nos. 1-2) Rome.

15. Robert J. Braidwood and Bruce Howe, *Prehistoric Investigations in Iraqi Kurdistan*, Chicago, 1960, p.60.

16. C. S. Coon, 'Cave Explorations in Iran 1949', Philadelphia, 1951.

the natural environment in the case of Sanghao or other parts in Gandhara. Here the Middle Stone Age man had not to go far in the chase of games in the open fields but on the other hand he had to wait in his own den until the games came within his easy reach to be shot and collected and brought into the cave for general feast, as is attested by the large number of bones in the cave. Two more characteristics noted by Braidwood (p. 179) are "the probable beginnings of the hafting of weapons and conscious burial of the dead." While the second feature yet remains to be discovered at Sanghao in the coming seasons's work, the first is amply proved by a good many tools having notches at the lower end for hafting.

Observations¹⁷ have already been made in the past regarding the Mousterian sites, which occupy corresponding position on the northern fringe of the Central Asian massif. in the Oxus valley and eastern Iran.

Thus today a wider zone is available in Asia for the play of the Mousterian technical tradition in almost similar conditions of living and probably at the same time during some phase of the last glaciation. This tradition is now traced right into Pakistan on both sides of the Indus. Dr. Mrs. Allchin and others linked this up with the Upper Soan but Paterson rightly treated it as an Upper Clacton intrusion in the context in which he was discussing. The new finds in Gandhara place at our disposal the materials which will lead to a new perspective and a new study of the entire Mousterian complex in western and southern Asia

The link on the Indian side is very difficult to trace as there is a great desert belt that separates the Middle Stone Age of West Pakistan from that of India.¹⁸ Dr. Mrs. Allchin has sought to trace the link in the following way: 'De Terra and Paterson have pointed out that certain flake tools from the Narmada are comparable to Late Soan tools from northern Pakistan, as defined by them. We are now in a position to reverse this, and say that the Late Soan falls typologically within the range of the Indian Middle Stone Age. de Terra and Paterson go further, and claim that the deposits which contain the Late Soan tools are contemporary with the second aggradation phase on the Narmada. The question of their relationship is a difficult one, as the two deposits are laid in quite distinct environmental regions, one north and the other south of the desert belt. None the less the typological comparisons, in my opinion, is a valid one and in itself implies contemporaneity. Thus the Late Soan extends the distribution of the Indian Middle Stone Age north of the desert belt into the southern foothills of the Central Asian Massif.'

This position no longer holds good in view of the fact that Paterson in his latest publication has distinguished the Late Soan from the "Upper Clacton". It is not the Late Soan which typologically falls within the Indian Middle Stone Age technical tradition, but it is the Upper Clacton industry with which the Indian

17. Cited by Mrs. B. Allchin in 'Indian Middle Stone Age' *loc. cit.*, p. 33.

18. For the Indian Middle Stone Age see B. Subbarao, *The Personality of India*, 2nd ed., Baroda, 1958, pp. 64-67; S. C. Malik, *Stone Age Industries of the Bombay and Satara districts*, Baroda, 1959; B. Allchin, *loc. cit.*; V. D. Krishnaswami and K. V. Saundararajan, 'The Lithic Tool Industries of the Singrauli Basin' in *Ancient India*, 7, 1951, pp. 40-66; H. D. Sankalia, *Prehistory and Protohistory in India and Pakistan*, chapter II; G. C. Mohapatra, *The Stone Age Cultures of Orissa*, Poona, 1962, pt. III, section VIII.

Middle Stone Age materials can be related. This industry is now known to have had a wider circulation in West Pakistan and had a direct link with the stone age sequence of Western Asia. It is from that very source that the Indian Middle Stone Age has to be derived through the intermediary of Pakistan. It is no use giving an independent and secluded life to the people in India even at this stage. It is just possible that future excavation at Sanghao may bring forth the anthropological evidence to establish the particular race of man who was responsible for the spread of this culture in this part of the world. Time and patience and more work on a concerted basis alone can reveal this phase of the history of man in Pakistan and finally give a place to him in the onward march of humanity.

THE Distribution of stone vases and ritual slabs in the near east.



Stone Vases as Evidence of Connection Between Mesopotamia and the Indus Valley —

By Farzand Ali Durrani

A little over four decades of explorations and excavations have produced ample evidence to define the chief character of the Indus Civilization but its origin and decline are still a matter of controversy. Its real place in the ancient world civilizations is slowly being revealed by a detailed study of the material content. In the following paper Mr Farzand Ali Durrani, Senior Lecturer in the Department, is focussing attention on the "stone vases" as traceable in the "Ancient Orient" and draws parallels in order to establish connection, both commercial and chronological.

Introduction

Certain types of stone vases provide important evidence for the connection between Mesopotamia and the Indus Valley. The most distinctive of these vases are of steatite or a dark stone and decorated sometimes in relief, sometimes by plain incision.

These types of stone vases can be classified in three main groups:-

- I. Curvilinear and geometric designs, including triangles, fachures, rectilinear designs.
- II. Architectural scenes, facades of doorways and windows.
- III. Human and animal figures.

Geometric, curvilinear and rectilinear designs, however, are sometimes combined with representational or mythological scenes. S.E. Persia, Makran (Bampur Valley) Elam, Sumer and Akkad have yielded examples showing pictures of what appear to be facades, doorways, and windows of buildings. Such buildings may perhaps be intended to portray shrines, for there are some examples where they occur in association with magical, or mythological scenes; spread eagles, horned beasts, females with long hair (perhaps goddesses) sometimes figure in these scenes. Such figures are represented on vases discovered at Mari in Syria and at Khafajah, in the Diyala region.

It will be seen that many of the vases show designs which combine two or three groups. For each of these groups the catalogue gives details of extant examples. Within the groups it is divided into four geographical areas (a) Indus Valley and Baluchistan, (b) Iran, (c) Mesopotamia, (d) Syria.

We will start with Mohenjo-daro where two examples occur of stone vases which have parallels further west in Baluchistan, Bampur Valley (S.E. Persia), Elam, Mesopotamia and Syria. The final section of the catalogue gives details of stone ritual slabs with handles from Iran, Mesopotamia and Syria.

CATALOGUE OF EXTANT STONE VASES

Section I.

Stone vases decorated in relief and incision with plain and geometric designs.

A. INDUS VALLEY

Pl. I. Fig. I.

Site.

Mohenjodaro.

Description.

Well preserved compartmental square vase vessels, described as a stone box by Marshall. (*Mohenjodaro* II, 369, Pl. CXXXI).

Materials and Dimensions.

Black slate. The partitions between the compartments are 0.3 inches thick at the base and thin out to 0.1 inch at the top. Each compartment measures 1.4 inches by 1.5 inches at the base. The whole box when complete must have measured 3.8 inches square by 2.45 inches high. It has a slight rebate at rim to hold the lid and has been divided into four compartments. Below the rim a small horizontal hole runs diagonally through each corner at a depth of 0.4 inches.

Location, Level and Date.

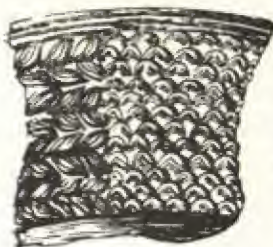
House XIII, Room No. 76, 5 ft. below the surface and therefore assigned to the late phases of the Harappa Culture.¹

Decoration.

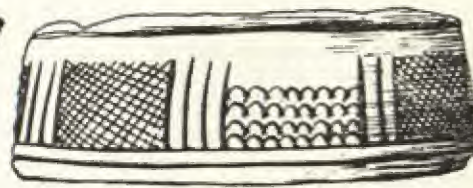
Hatched triangles and chevron in incisions. The decoration on the box has been divided into two registers by a horizontal band in the middle.

1. There is a similar box-like vessel, in the same shape and material at a depth of 7 ft. in the same area, house and room which has not been included, for it bears no decoration. (See Marshall, *Mohenjo-Daro and Indus Valley Civilization*, Pl. CXXXI, 36.)





UR 1



UR 2



UR 3



UR 4



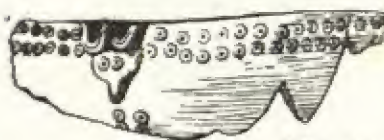
UR 5



6



TELL-AGRAB



MARI 1



MARI 2



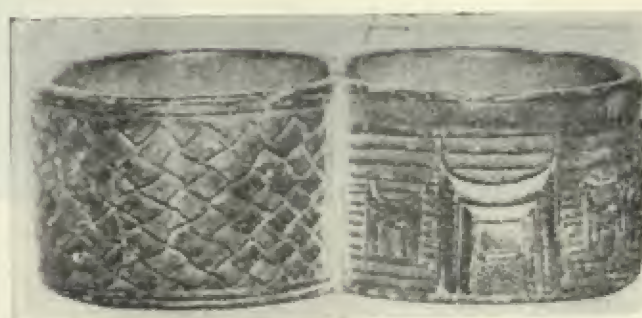
Katukan 0.14

1. KATUKAN



III

2. BAMPUR



3. SUSA



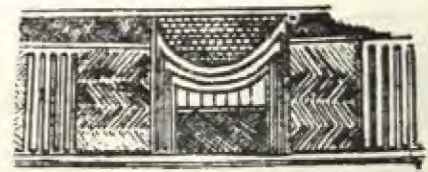
4. KHAFAJAH



5. ADAB



1. ADAB

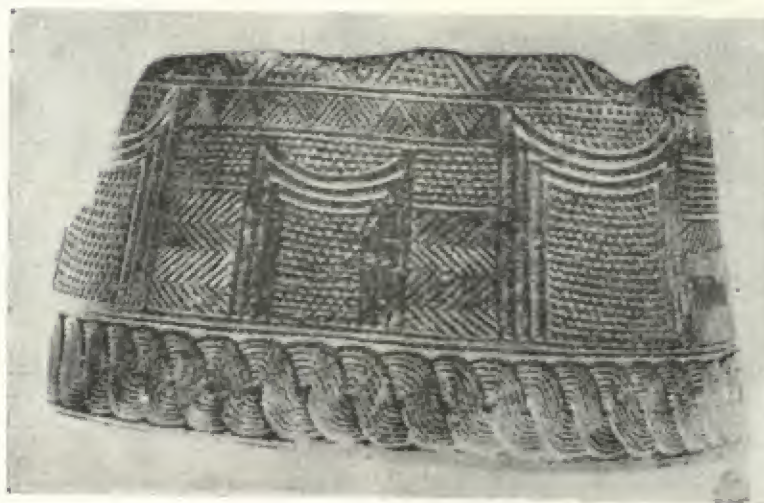


2. TELLOH

IV



3. ABU-HUBAH (SIPPAR)



4. MARI

V



1. KHAFAJAH



2. KHAFAJAH



3. TELL ASMAR



1. NIPPUR

2. MARI



3-a. TELLOH



3-b. TELLOH



VII



1, 2, 3, & 4 ALL FROM MARI



Scale about

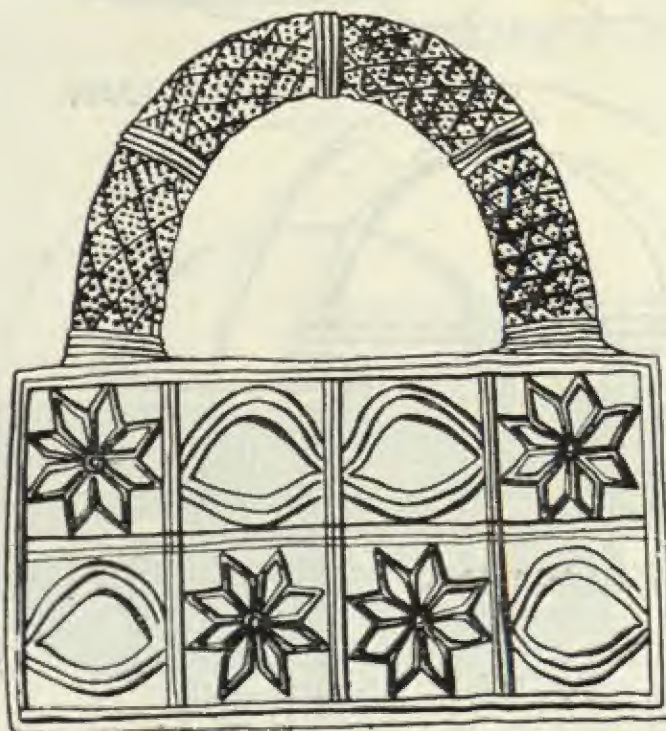
RECONSTRUCTION OF VASE FRAGMENTS FROM
MARI. SHOWN ON PL. VII

IX



1

MARI



2

UR

DURRANI

(ANCIENT PAKISTAN)



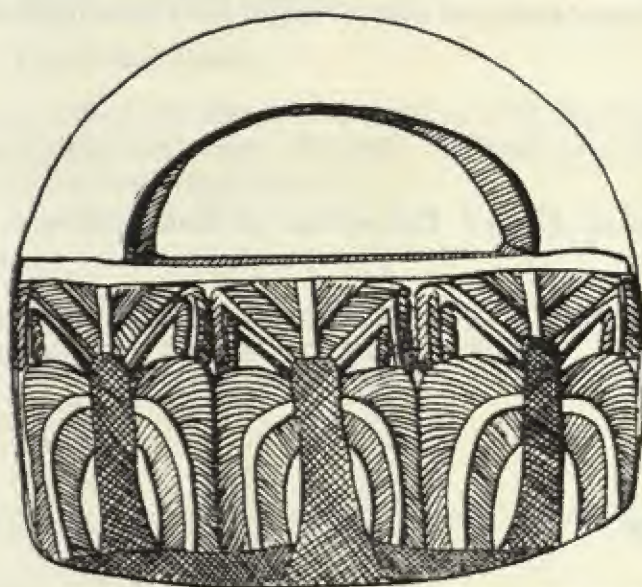
A

AZERBAIJAN



B

XI



A

PALMYRA (TODMUR)



B

Marshall suggests that these boxes were used perhaps for valuable cosmetics. He further thinks that the maker of this vessel was probably imitating Sumerian black ware pottery from Mesopotamia and that it "might have been imported from Mesopotamia".

Pl. I. Fig. 2.

Site.

Mohenjo-Daro (E. Mackay. *Further Excavations at Mohenjodaro*, p. 321, Pl. CXLII.

Description.

Fragment of vessel, slightly curved. Probably the fragment of a conjoined jar like Fig. 3 on Pl. III.

Material.

Steatite. Greenish-grey.

Location, Level and Date.

House V, Room No. 53 in the DK area G southern portion, at a depth of 28.1 ft., from the early levels. Dated by Mackay to 2800 B.C. on stylistic comparisons with vases, Fig. 14, Pl. I and Fig. 3, Pl. III, but it may be assigned to the middle of the third millennium according to the revised ED dating in Mesopotamia².

It is an important discovery, for the early levels of Mohenjo-Daro are generally dated on the basis of its presence, which helps largely to establish the chronology of the earlier phases of Mohenjo-Daro.

Decoration.

Pattern resembling mat-work, worked in relief as in Fig. 3, Pl. III from Susa D and Fig. 14, Pl. I from Kish. See also Fig. 4, Pl. III from Khafajah.

Pl. I. Fig. 3.

Site.

Mehi-Baluchistan (Stein. *An Archaeological Tour in Gedrosia*, M.A.S.I. No. 43, p. 156,7 Pl. XXVIII, Mehi, No. 1; 6; 4.

Description.

Small cylindrical vase, circular in shape and compartmented. (In the Central Asian Museum, Delhi).

2. We will follow the new dating suggested by Professor Mallowan in *The Dawn of Civilization*, Table X, p. 661.

Material.

Dark stone, perhaps steatite.

Location, Level and Date.

Section 1. 6 of the mound. Associated with painted and plain pottery, which closely resembles that from Periano Ghundai and Kulli and therefore dated typologically to the same period.

Decoration.

Geometric, in plain incision, triangles, chevrons and incised lines. It probably served the same purpose of keeping cosmetics.

Pl. I. Fig. 4.

Site.

Mehi (Stein. *An Archaeological Tour in Gedrosia*, p. 160, Mehi II. 1.3).

Description.

Fragment of a large cylindrical vase, with four compartments. (In the Central Asian Museum, Delhi).

Material.

Fine-grained stone, probably steatite.

Location, Level and Date.

Section II of the mound, in association with a number of similar incised vessels and painted pottery and figurines of Kuli style, and therefore assigned to the Kuli-Mehi contexts. (For discussion of dating see the conclusion of this paper).

Decoration.

Incised in the same style of geometric decoration in hatched triangles and lines. It probably served the same purpose as Fig. 3.

Pl. I. Fig. 5.

Site.

Shahi-Tump (Stein. *An Archaeological Tour in Gedrosia*, p. 91, Shahi-Tump III, 9). Shahi-Tump is situated on the river Kej, near Turbat.

Description.

Fragment of cylindrical vessel with four compartments. (In the Central Asian Museum, Delhi).

Material.

The excavator could not be sure whether it was made of stone or of hard dark clay.

Location, Level and Date.

Section III of the mound, unstratified, but bearing a pattern of decoration akin to those found on painted Chalcolithic ware from Zhob and Sistan. Shahi-Tump cemetery dated to 2400 B.C. by Piggott (Piggott. *Prehistoric India*, p. 243 and c. 2000 to 1900 B.C. by Gordon (Gordon. *The Prehistoric Background of Indian Culture*, p. 63, Also see the conclusion of this chapter).

Decoration.

Incised, hatched triangles and chevrons.

Pl. I. Fig. 6.

Site.

From River Dasht region on the boundary of Iran and Pakistan Makran. (Piggott. *Prehistoric India*, 116).³

Description.

Fragment of a vessel, perhaps a circular one Ex-Quetta Museum, Now in Central Asian Museum, Delhi).

Material.

Steatite or similar stone.

Location, Level and Date.

Unstratified, but could belong to ED III on the basis of comparison with certain vases from Iran and Mesopotamia.

Decoration.

Relief work, with knobs or raised dots, each having small lines. The neck is thickly bordered with a line in relief. Similar decoration occurs on a vase from Ur. Fig. 1, Pl. II. Professor Piggott has compared this with vessels from Queen Shubad's grave at Ur, and has even regarded this series of vases as exports from Makran to Iran and Mesopotamia. I maintain, however, that this single example be regarded as an import from the West.

B. IRAN

Pl. I. Fig. 7.

Site.

Khurab, Bampur-Valley (Persian Makran) (Stein, *An Archaeological Reconnaissance in N.W. India and S.E. Iran*, p. 121, KHI. F.I. 263, Pl. VI).

3. I wish to express my gratitude to Professor Piggott for allowing me to have the photograph of Fig. 6, and showing me some of his useful drawings and notes from Baluchistan.

Description.

Cylindrical vase.

Material.

Dark pot-stone or steatite.

Location, Level and Date.

Trench F of the mound. Unstratified by the excavator; associated with large number of tall pottery jars, mostly unpainted, an alabaster cup and bronze objects, such as dishes and spear heads. Dr. F.A. Khan assigns it to an ED period (Khan, *A.S.I.C.*, 434) while Piggott dates the Khurab cemetery to about 2000 B.C. (Piggott, *Prehistoric India*, 216) and Gordon dates the Bampur incised vessels to about 2300 B.C. (Gordon, *The Prehistoric Background of Indian Culture*, 49). A date of about 2000 B.C., contemporary with the Kulli-Mehi stone vessels is the more probable of the two alternatives.

Decoration.

Incised horizontal lines, triangles and chevrons, divided into three zones by horizontal bands, a common decoration on stone vases from Bampur.

Pl. I. Fig. 8.

Site.

Tepe-Giyan (Herzfeld), *Iran in the Ancient East*, p. 90, Pl. XXIV)

Description.

A cylindrical vessel. (In the Metropolitan Museum, New York).

Material.

It is made in stone, though Herzfeld does not mention the quality, but could be steatite.

Location, Level and Date.

Unstratified, but Herzfeld thinks that it could be of ED period.

Decoration.

Divided into six horizontal bands, of two different types of work. Three of them, that is the first one at the top, third and fifth, show concentric knobs or raised dots, in relief work. This pattern of decoration is used to represent hills (in ancient Mesopotamia or depicted landscape on the objects from the near-East).

The rest of the three bands on the vase represent trees arranged in various lines with their leaves falling to the ground, they are shown laden with fruits. Herzfeld suggests that the trees resemble Egyptian aloes, but I think that Contenau, in discussing a vase showing such trees (Pl. I, Fig. 9) is certainly right in believing that they are palm and date trees.

Pl. I. Fig. 9.

Site.

Alleged to have come from Susa (Elam) (Contenau, *Manual de Archeologie Orientale* II, p. 643, Fig. 448).

Description.

A cylindrical vase (In the Louvre, Paris).

Material.

Dark grey-green steatite.

Location, Level and Date.

Unstratified. According to Contenau it may be dated c. 2900 B.C. But it could be of an ED II-III period, possibly the middle of the third millennium B.C.

Decoration.

In relief and bordered by horizontal bands at the top. Below the vessel shows some palm trees, with their leaves fallen to the ground in the same style as shown in Pl. I Fig. 8 with the fruit laden branches. Contenau asserts that the fruits are shown close to the little palm tree, known as a "downi" whose leaves fall in the same fashion. But I think the trees in the background are intentionally carved in a smaller size than those in the foreground, to show the long line in which these trees are arranged.

Pl. I. Fig. 10.

Site.

Perhaps from Susa (Elam) (Contenau, *Manual de D' Archeologie Orientale* II, p. 643, Fig. 447).

Description.

A cylindrical vase. (In the Louvre, Paris).

Material.

Dark grey-green steatite.

Location, Level and Date.

Unstratified, but Contenau thinks it may be dated 2900 B.C. on stylistic basis. It could, however, be of an ED II-III period, possibly 2500 B.C.

Decoration.

In relief and is described by Contenau as "conventional curls". It is more likely to represent the flowing streams often shown on objects from Sumer and Elam rather than the style of hair, as Contenau describes it.

Pl. I. Fig. II.

Site.

Susa (Elam) (*L'Art de la Mesopotamie*, Le Musee du Louvre, 250).

Description.

A large cylindrical vase. (In the Louvre, Paris).

Material.

Steatite.

Location, Level and Date.

c. 2500 B.C.

Decoration.

In relief, bordered by horizontal bands on either side. The main body of the vase has been decorated with raised dots or knobs and ornamented with triangles and chevrons by two thick bands, raised in relief and itself decorated in criss-cross lines.

Pl. I. Fig. 12.

Site.

Susa (Elam) (*L'Art de la Mesopotamie*, Le Musee du Louvre, 250).

Description.

Conical-shaped vase. (In the Louvre, Paris).

Material.

Steatite.

Location, Level and Date.

2500 B.C.

Decoration.

Raised dots or knobs, in horizontal bands, in relief.

Pl. I. Fig. 13.

Site.

Susa (Elam) (*L'Art de la Mesopotamie*, Le Musee du Louvre, 250).

Description.

A dish-shaped vase. (In the Louvre, Paris).

Material.

Dark stone, perhaps steatite.

Location. Level and Date.

c. 2500 B.C.

Decoration..

In relief, in raised dots or knobs, in four zones, divided by thin lines.

C. MESOPOTAMIA

Pl. I. Fig. 14.

Site.

Kish (Field, *Steatite vases from Kish, Antiquity*, VII, Pl. III, 84-5).

Description.

Fragment of a vase (Now in the Natural History Museum, Chicago).

Material.

Dark greenish steatite.

Location. Level and Date.

All fragments of this type from Kish (three known so far) come from trenches Nos. 7, 8 and 10, Section C of the site, generally found at a depth of 6-7 meters. They have been dated to about 2800 B.C. Field assigns this date, by comparing this with Fig. 3 (Pl. III) and Fig. 2 (Pl. I) which are similar. He assumes that this dating would agree with the dating assigned to Susa II D, by de Mecquenem, (see Fig. 3, (Pl. III)). But according to the revised dating assigned to Susa II D by Professor Mallowan, it should be 2500 B.C. (Mallowan, *The Dawn of Civilization* p. 66).

Decoration.

This is the same type worked in an intricate mat-pattern in relief, as Figs. 2 and 23. Thus it is possible that this fragment like Fig 2 belonged to the same type of vase as the one from Susa, Fig. 3, Pl. III.

Pl. II. Fig. I.

Site.

Ur. (Woolley, *Excavation at Ur*, IV, Pl. XXXV. u. 19085).

Description.

A spindle-shaped vase. (In Baghdad Museum. No. B. 19839).

Material and Dimensions.

Steatite. Height 0.06 Dimension 0.12 m.

Location, Level and Date.

Pit X of the series, grave Royal Cemetery. ED III, or Early Sargonide.

Decoration.

Decorated in relief in two registers, one showing raised dots or knobs in concentric shape, and the other rhombic or lozenges.

Pl. II. Fig. 2.

Site.

Ur. (Woolley, *Excavation at Ur*, IV, Pl. XXXV, u. 18865).

Description.

A dish-shaped vase.

Material.

Steatite.

Location, Level and Date.

Royal Cemetery. ED III or Early Sargonide period.

Decoration.

In relief in raised dots or knobs and divided by four vertical lines carved in relief.

Pl. II. Fig. 4.

Site.

Ur. (Woolley, *Excavation at Ur*, II, Pl. CLXXVIII, u. 10523, Type 10).

Description.

A cylindrical vase. (In the British Museum).

Material and Dimensions.

Steatite. Dark grey, Height 0.10 mm. rim 0.18 mm. base 0.17 mm.

Location, Level and Date.

Queen Shubad's grave. No. P.G./800. ED III period.

Decoration.

Rasied dots or knobs and is ornamented with two zig-zag lines, making triangles and lozenges on the body of the vase. It has been bordered by two horizontal bands, having a third zig-zag line in between them.

Pl. II. Fig. 3.

Site.

Ur. (Woolley, *Excavation at Ur*, II, Pl. CLXXVIII, u. 10522, Type 10).

Description.

A small cylindrical vase. (In the British Museum, B.M. 121698).

Material and Dimensions.

Grey-green steatite. Height 0.5 mm, rim 0.95mm, base 0.09mm.

Location, Level and Date.

Queen Shubad's grave. No. P.G./800. Royal Cemetery, ED. III period.

Decoration.

In relief in concentric knobs. A horizontal band in the middle divides the vase into two lateral zones.

Woolley also refers to other stone vases, from two graves, Nos. P.G. 337 and P.G. 1633 but neither of them have been illustrated. It should, however, be noted that P.G. 337 is a Royal Tomb, ED II-III.

The second grave P.G. 1633 was found at a considerable depth, 6.3 meters below the surface and therefore cannot be later than the others. It is worth observing that usually at least two of the graves which contained these vessels belong to important persons. It therefore follows that these vessels were highly prized objects. Thus it is not surprising that parallels for them have not been found as far distant as Iran and India.

D. SYRIA.

Pl. I. Fig. 15.

Site.

Mari (Parrot, *Mission Archeologique de Mari, Le Temple de Ishtar*, p. 116, Pl. XVIII).

Description.

A large globular vase with flat base. Found in two pieces and restored, (here reduced from the original size).

Material and Dimensions.

Steatite. Height .205 mm. diameter .205 mm. diameter at neck .128 mm.

Location, Level and Date.

Courtyard A 20, under the pavement of flooring, next to the statue of Ebil-il. Level A. ED II or III period. The temple is said to have been destroyed either by a Sumerian king of Lagash, probably Eannatum or by Sargon of Agade.

Decoration.

The upper half is in relief with a double tress; the holes suggest that it was inlaid. It has also been thought to represent two serpents interlaced.

Pl. I. Fig. 16.

Site.

Mari (Parrot. *Mission Archeologique de Mari, Le Temple de Ishtar*, p. 118, Pl. LI.

Description.

A large globular vase, (here reduced like Fig. 15).

Material and Dimensions.

Steatite. Height .240 mm. dimension .202 mm.

Location, Level and Date.

Courtyard A 20, near the statue of Ebil-il, level A therefore ED II-III.

Decoration.

Elaborately worked in six lateral zones, in relief, divided by a zig-zag line carved within horizontal bands.

Section II. *Stone vases representing facades of doorways and architectural scenes.*

The second group of our vases have designs representing facades of doorways and architectural scenes, in relief and sometimes incised decoration. They are sometimes elaborately decorated and in a few cases combine with mythological scenes.

It has, however, been noticed, that none of our vases from the Indus Valley, Baluchistan and Bampur Valley, except Figs. 2 and 6 (Pl. I) have been decorated in relief. Fig. 2 (Pl. I) might belong to a stone vase, similar to Fig. 3 (Pl. III) and therefore must have been imported from Elam or Mesopotamia. The rest of the specimens have been worked in incision.

Two of our vases from group II, Nos. 1 and 2 (Pl. III) Bampur Valley, are not made in stone and are instead made in hard, dark clay. But they are worth illustrating, for the similar ware and the style of decoration is common.

A. IRAN

Pl. III. Fig. 1.

Site.

Katukan (Bampur-Valley) Stein, *An Archaeological Reconnaissance in N.W. India and S.E. Iran*, p. 117. Pl. VI. Kat. 019).

Description.

A large cylindrical jar.

Material.

Hard dark clay.

Location, Level and Date.

About 2000 B.C. For further discussion of the incised vessels from Bampur see p. 94

Decoration.

Incised, in hatched triangles on the shoulder and bottom, whereas the main body of the vase shows central doorways with lintels and side windows. The front of the doorways is decorated in wicker-work, in incision.

Pl. III. Fig. 2.

Site.

Bampur-Valley (Stein, *An Archaeological Reconnaissance in N.W. India and S.E. Iran*, p. 117, Pl. VI, Bamp. A. 161).

Description.

A globular vase.

Material.

Hard dark clay.

Location, Level and Date.

See the discussion for the date of these incised vessels from Bampur on page 94

Decoration.

With geometric designs, hatched triangles in incision on the shoulder, while on the main body it shows a facade of a central doorway, with lintels and side windows in the same wicker-work or mat pattern.

Pl. III. Fig. 3.**Site.**

Susa (*M.D.P.* XII, 69).

Description.

A double conjoined jar. (in the Louvre, Paris).

Material and Dimensions.

Dark green steatite. Length 18.5 cm.

Location, Level and Date.

From the Temple of Shusinak in Susa II D. Originally dated by Mecquenun to c. 2880 B.C. on the basis of the comparison of Susa II D period with ED periods, but according to the revised dating of ED periods in Mesopotamia Susa II D should be dated to the middle of the third millennium (This date agrees with the dating assigned to this vase in *L'Art de la Mesopotamie* Le Musee du Louvre, 250).

Decoration.

On one side it shows the architectural scene, in relief carving, and on the other side it has the same pattern and style of decoration in relief as the specimen from Mohenjo-Daro (Fig. 2 Pl. I) and Kish (Fig. 14, Pl. I) represent. On the former side of this vase representing an architectural scene it shows geometric decoration on the neck of the vase, and the main body represents the central doorways and side windows with lintels. It is in the Louvre Museum, Paris (*L'Art de la Mesopotamie*, Le Musee du Louvre, 250). This vase is interesting enough to throw light not only on the diffusion of these types of vessels, but to enable us to determine the chronology of the Indus Valley. A fragment of a similar vase (Fig. 2, Pl. I) which was found in the earliest levels of Mohenjo-Daro (see page 64) remains one of the main points of evidence in establishing the early contacts of the Tigris and Euphrates (as shown by Fig. 14 Pl. I from Kish).

B. MESOPOTAMIA.**Pl. III. Fig. 4.****Site.**

Khafajah Diyala region (Frankfort, *O.I.C.* 19. Fig. 56).

Description.

A cylindrical vase.

Material.

Dark grey stone, perhaps steatite.

Location, Level and Date.

Sin Temple IX. Room Q 43: II ED II period. (Delougaz and Seton Lloyd, *Pre-Sargonic Temples in the Diyala Region*, p. 69).

Decoration.

In the centre it shows the facade of a doorway with three lintels carved in relief. The doorway is decorated in wicker-work design, or mat pattern, showing reed work, while the upper portion on the doors is carved into three different blocks, divided by four thick lines in relief. The rest of the vase round the doorways is decorated in relief, in hatched triangles, vertical and horizontal lines and the same with woven intricate decoration as on vases Figs. 14 Pl. I and 3 Pl. III.

Pl. III Fig. 5.

Site.

Adab (Bismaya) (Herzfeld, *Iran in the Ancient East*, p. 90, Fig. 179).

Description.

A fragment of a vase.

Material.

Perhaps steatite.

Location, Level and Date.

Unstratified, but probably ED II-III.

Decoration.

Interesting representations of doorways and windows of two houses, one over the other, probably a double storey building. It has been decorated in incision and the doorways, representing lintels, have another rather elaborate design, showing small blocks over the doorways, decorated with mat pattern like Fig. 3, Pl. III. Above the lintel on panels, it has zig-zag and straight lines in incision. The building is shown on the bank of a river, which undulates between hills in landscape, in ancient Sumer.

Pl. IV. Fig. I.

Site.

Adab (Delougaz, *Architectural representation on Steatite Vase. Iraq* Vol. XXII, pp. 93-94. Pl. IXC.

Description.

A large cylindrical vase found in various pieces and restored.

Material.

Steatite.

Location, Level and Date.

Unstratified, from a rubbish dump but may belong to ED II or ED III on stylistic basis.

Decoration.

In relief, with bands of zig-zag lines, raised dots, divided in three registers of scenes, representing door and windows, in the usual manner. The topmost register, however, represents a peculiar structure of battlement or towers.

Pl. IV. Fig. 2.

Site.

Telloh (Woolley, *Ur. I, Al-ubaid*, pp. 68-69, Fig. 26).

Description.

A fragment of a vase.

Material.

Stone.

Location, Level and Date.

Unstratified, probably ED. II-III.

Decoration.

Woolley thinks that this perhaps represents a facade of a primitive Sumerian building, which serves as a link between the hut dwelling of Al-ubaid and the Nin-Khursag Temple. He believes that the main construction is of half-timber and matting. The gate tower, according to Woolley, is made of bricks. Woolley thinks this design of the building, certainly, leaves little doubt as to the wooden origin from which the pannelled brick-work of the Sumerian temple was derived. Woolley is inclined to assert this view because of the actual panelling in wood, surviving in one case, in the building of A-anne-padda⁴.

Pl. IV. Fig. 3.

Site.

(SIPPAR) Abu-Habah (Woolley and Hall, *Ur I, Al-ubaid* pp. 68-69, Fig. 27.)

4. C.L. Woolley, "*Ur*", Vol. I, p. 69.

Description.

Fragment of a vase (Now in the British Museum, B.M. 118275).

Material.

Steatite.

Location, Level and Date.

Unstratified, probably ED. II-III.

Decoration.

The figure also represents the same style and pattern of wood construction, with bricks, used in the panels. It has the same zig-zag lines of wicker-work.

Pl. IV. Fig. 4.

Site.

Mari, Syria (Parrot, *Mission Archeologique de Mari*, Pl. XLVI.)

Description.

A large cylindrical vase.

Material and Dimensions.

Steatite. Height. 115 m. 220 m. thickness at base .02 m.

Location, Level and Date.

Cellar 18, level A, Temple of Ishtar, Pre-Sargonide context. ED III. Could be ED II-III.

Decoration.

Above the shoulder it shows hatched triangles, in relief, and raised dots, while on the body of the vase it represents facades of doorways, with lintels. The doors in this case have raised knobs or dots. It also has carved triangles between the doorways. At the base it has been ornamented with a double tress, or guilloche style of decoration, with dots in the centre. Dr. Khan, while discussing this vase, describes the decoration at the base as ropes, associated with the buildings,⁵ but Parrot suggests that it may perhaps be the symbol of the water of fertility, the foundation on which according to Mesopotamian Mythology, the world stood and from which it received its life. Thus it may perhaps express the Sumerian mythological belief, of the fertility of the earth. It may even be the symbol of two streams, referring to the two rivers, Tigris and Euphrates, with which the goddess with flipper-like hands on a Kassite monument is associated⁶.

5. Khan, *A.S.I.C.*, 266.

6. Frankfort, *A.A.A.O.*, Pl. LXX, a.

Section III. *Stone vases representing animal and human figures.*

The third group of such stone vases, depict animal and human figures. These figures are often shown in magical or ritual attitudes and may represent mythological scenes. Sometimes they are shown on the vases, combining these mythological scenes with architectural scenes. It is, however, worth noting that these types of stone vessels do not occur in Persia or the Indus Valley, and we only find them in Mesopotamia and Syria.

A. MESOPOTAMIA

Pl. V. Fig. 1.

Site.

Khafajah Diyalah Region (Frankfort, *A. A. A. O.*, Fig. 9, 19).

Description.

A cylindrical vase (In the British Museum, B.M. 12887).

Material.

Dark green steatite. Height 10 cm.

Location, Level and Date.

Unstratified, but may belong to an ED II-III period⁷. This vase has been illustrated and discussed by Frankfort⁸, (c. 2500-2700 B.C.) and also by E.D. Van Buren⁹.

Frankfort asserts that this quality of stone was rarely used in Mesopotamia before the ED period.

Decoration.

Three scenes of different types are depicted on this vase. In the first group, a female figure is shown as astride, behind the two humped bulls of a type familiar to Mohenjo-Daro seals. She has been interpreted by Mrs. V. Buren as a rain goddess. This interpretation is no more than a conjecture. Professor Mallowan, however, maintains that this figure is a male rather than a female, with long locks of hair and a scalloped skirt, which is not typically Mesopotamian. (M.E.L. Mallowan, loc. cit). He considers the whole is Indian in character. In Mesopotamia such double representation of water is usually interpreted as symbols of

7. Mallowan in *The Dawn of Civilization*, p. 69.

8. *A.A.A.O.*, p. 19, where there is a discussion of the scenes and Frankfort admits that the interpretation is uncertain, but that the representation of two waters in the first scene may in some way be connected with the fertility of the earth. He writes that the humped ox is foreign to Mesopotamia, perhaps an Indian breed.

9. *Analecta Biblica*, XII 1959. Fig. I.

the two great rivers, i.e. Tigris and Euphrates. In this connection a famous Kassite monument from Mesopotamia, found at Warka, depicts in relief on the brick facades of a temple a series of gods and goddesses, with flipper-like hands, associated with such streams.¹⁰ On a wall painting from the palace of Mari (before 1750 B.C.) we have picture of a horned goddess, associated with two streams of water, and fish swimming amid them. Water and fish also occur on the famous Ishtar statue from Mari, and these representations seem to be strong evidence that the artist thus intended to signify the two rivers of Tigris and Euphrates.

On the vase the scene continues and in the second group the same personage appears, standing between two panthers, this time grasping a snake in each hand. Frankfort suggests that the snakes may stand for the power of the earth, and balance the fertilizing power of the water in the first group.

Of all the three scenes the third one is most interesting. It is also shown in a photograph (Frankfort, loc. cit. Pl. II B) with one of the snakes, and a panther of the second group. The scene depicts the humped bull of the first group being overthrown and attacked by a lion, and rent by a bird of prey, probably an eagle. This scene on the vase also includes a scorpion and a bear with a palm tree.

Now, as Frankfort points out, the style of carving and quality of stone can be paralleled elsewhere in the Diyala Valley. This vase (Fig. 1) which is already seen, possibly comes from the Diyala Valley, is Indianesque in character, for the bull strongly resembles those depicted on the Indian seals. One of the seals from Mohenjo-Daro represents the bull, with two birds.¹¹ In one case, two cobra snakes have been shown on one of the amulets from Mohenjo-Daro with a deity.¹²

Moreover there is another seal of Indian style, from Ur, of Isin-Larsa period having been discovered in a vaulted tomb,¹³ and discussed by Professor Gadd.¹⁴ It is a stone cylinder seal, from a Larsa tomb which had been hacked down into a wall dividing two apartments in the north-west annex added by Bursin, king of the Third Dynasty of Ur, to the funerary buildings of his father. The seal represents a palm tree, fronted by a humped bull, with a round manger for fodder; behind the bull is a scorpion and two snakes, with a horizontal human figure, having a rayed head, above. Gadd suggests that this seal can either be of the Indus style, or made under a strong Indian influence. Wheeler, in his discussion of the seals of Indian style from Mesopotamia, asserts that "the general style of this seal is that of the Indus Valley, though the very large circular eye of the bull is perhaps of Kulli culture".¹⁵

10. See Frankfort, *A.A.A.O.*, Pl. 70-1.

11. Sir John Marshall, *Mohenjo-Daro and the Indus Valley Civilization*, p. 338, Pl. CXI.

12. Sir John Marshall, *Mohenjo-Daro*, pl. CXVIII, VS 210 where a seated figure is worshipped by two persons, who are flanked by two cobra on either side.

13. *Antiquaries Journal*, XI, 351.

14. Seal of Ancient Indian style, found at Ur-C.J. Gadd, from the *Proceedings of the British Academy*, XVIII, Pl. I, No. 6.

15. Sir Mortimer Wheeler, *The Indus Civilization*, p. 86.

Pl. V. Fig. 2 a-b.

Site.

Khafajah Diyalah Region (O.I.C. 19, Fig. 54-55; also O.I.C. LXVIII, Fig. 63, 69).

Description.

The fragments of a large vase (Preserved in the Baghdad Museum).

Material.

Dark green steatite.

Location, Level and Date.

Room No. Q 43/11 Sin Temple IX, ED II period.

Decoration.

The scene divides itself into two parts, different from one another. The upper portion of the vase is rather interesting, for it represents a mixture of scenes, perhaps mythological. On the top a bullman is shown struggling with two lions, which is a common scene occurring on most of the cylinder seals from Mesopotamia. Next we see a jackal-like animal, with big ears. Can this be an equid, a jackal, or onager? Further right is a human figure in Sumerian sheepskin; he seems to have grasped an unidentified object, because the scene is discontinued. Below it another series of the scenes has been represented. On the left some broken figures of animals, a wild goat, spread eagles having wild goats under each claw. On the right another bull-man, different from the first, seems to have grasped a bull by its horn.

The wild goat is a native animal to ancient Mesopotamia, which was commonly found in the neighbourhood of ancient Sumer. The eagle and the Sumerian sheepskin dress shows Mesopotamian origin. But the bull may either be Indian or Indianesque.

The lower portion of the vase represents geometric designs, incised decoration and facades of doorways and windows and lintels with wicker-like work.

The scenes on the upper part of the vase are interesting, as they represent some of the mythological symbols of Mesopotamia. For instance, the bull-man which constantly appears on the Mesopotamian seals, shown fighting or struggling with the wild beasts and animals, the Sumerian dress, and the winged eagle.

Pl. II. Fig. 6 a-b.

Site.

Tell-Agrab Diyalah Region (Frankfort, *Tell-Agrab*, I.L.N. Sept. 12th, 1936).

Description.

Two fragments of a stone vase.

Material.

Green steatite.

Location, Level and Date.

ED Temple and therefore assigned to ED II-III.

Decoration.

On one of the fragments, Fig. 6b (Pl. II) shows a figure, resembling the figure shown on our vase, Fig. I (Pl. V) with another figure, perhaps a female, standing on its knees, with its head completely missing and grasping something in its hand.

The scene has been shown in front of a facade of a building, which is unluckily missing. The other fragment seems to have been connected by the facade of the building above. It shows a humped bull of Indian origin, which is consequently shown in the same fashion, with a manger in front, on Indian seals, and is convincingly enough of Indian influence in the production of this vase and therefore suggests strong evidence for contacts between the Indus Valley and Mesopotamia in the early-dynastic period.

Pl. V. Fig. 3.

Site.

Tell-Asmar Diyala Region (Herzfeld, *Iran in the Ancient East*, p. 90, Fig. 197b).

Description.

A small fragment of a vase.

Material.

Steatite.

Location, Level and Date.

Herzfeld assigns it to the Jamdat Nasr period while Dr. Khan thinks that it might be of ED II period (Khan, *A. S. I. C.*, p. 267).

Its stratigraphy and its close relation to the one from Adab (Fig. 5 Pl. III) inclines Herzfeld to date it to the end of Jamdat-Nasr period. Dr. Khan believes that such a high dating is rather an exaggeration and dates the vase under discussion to the ED II period.¹⁶

16. Dr. F.A. Khan, *A.S.I.C.*, p. 267.

Decoration.

The decoration combines a mythological and an architectural scene. On top it represents a similar scene to that shown in Fig. 2, Pl. V, a spread eagle having a wild goat under each claw, while below it shows the same type of facades of doorways and windows, with lintels. The doorways are again decorated with wickerwork below and divided into different zones or vertical blocks, as in the case of Fig. 2 (Pl. V) and Fig. 5 (Pl. III).

Pl. II. Fig. 5.

Site.

Ur 9 Woolley, Ur. IV, p. 173, Pl. XXXV, u. 7145.

Description.

A cylindrical vase.

Material.

Steatite.

Location, Level and Date.

Royal cemetery grave. Probably ED III.

Decoration.

In relief, the decoration shows scorpion in procession on the surface of the vase. The body of the scorpion is carved in relief.

Pl. VI. Fig. I.

Site.

Nippur (*I.L.N.* Sept. 9th, 1961).

Description.

A cylindrical vase.

Material.

Steatite.

Location, Level and Date.

ED Temple, period II, c. 2700-2600 B.C.

Decoration.

In relief, showing a serpent and a lion, fighting with one another. The bodies of both the animals have holes, probably for incrustation. The lion is shown grasping the body of the serpent.

C. SYRIA

Pl. VI. Fig. 2.

Site.

Mari (*Les Annales Archeologiques de Syria*, 2/1952, Fig. 5, Pl. III).

Description.

A cylindrical vase. No detailed description published. Base probably cylindrical.

Material.

Grey-bluish steatite.

Location, Level and Date.

From the Temple of Ishtar and therefore not later than ED III period.

Decoration.

There is an interlocking band of Guilloche with dots in the centre, and this is framed by zig-zag border, a type of decoration familiar on the vessels of this series.¹⁷ The scene on the body of the vase is in two registers, represented by a vertical panel, with cross-hatching which may possibly be a conventionalized representation of a palm tree; in one we have series of horned animals possibly domesticated. In the other panel there is a kneeling figure apparently female, with bird-like head. Her torso also appears to be bare, and she is wearing a lion cloth below the waist. A strange, curved object is represented, in relief, in front of her legs; like her lion cloth it is carved in hatching, and may be a part of her dress. Can this be a train, a bushy tail of the kind sometimes depicted on early dynastic Mesopotamian carvings?

She is bending down in front of a leafy tree; a second, larger one, may be seen in the background behind her. Larger trees similar in character are incised on north Syrian pottery of the ED period. This therefore is a good figured example of our Indianesque series. It must, however, be admitted that for the present we find it difficult to offer a parallel for our allegedly Indian goddess although she is clearly not normal to Mesopotamia.

Pl. IX. Fig. I.

Site.

Mari (Parrot, *Mission Archeologie de Mari*, p. 116, Pl. XLIX, 267).

Description.

A fragment of a vase.

17. Parrot, *Le Temple d'Ishtar* I, 21.

Material and Dimensions.

Dark grey steatite. Height .121 mm. Diameter at base 138 mm. Diameter at the top .082 mm.

Location, Level and Date.

Temple of Ishtar. Level A. ED II-III.

Decoration.

It has a similar scene to the one shown on Fig. I (Pl. VI) with a lion grasping the serpent.

Pl. II, Fig. 7, 8.

Site.

Mari (Parrot, *Le Temple d'Ishtar*, Pl. XLIX 156, 117).

Description.

A fragment of a vase.

Material.

Dark green steatite.

Location, Level and Date:

Temple of Ishtar. ED. II-III.

Decoration.

Ornamented with small circles with small holes in the centre, on the shoulder of this piece while below an animal figure, probably a deer or stag with short horns and a long neck has been depicted.

Pl. VII. Fig. I

Site.

Mari (Parrot, *Le Temple d'Ishtar*, Pl. XLVII 165, p. 115).

Description.

A fragment of a vase.

Material and Dimensions.

Steatite. Length .266 mm.x 135 mm.

Location, Level and Date.

Temple of Ishtar. Courtyard Room 20. Level A. ED II-III.

Decoration.

It shows two snakes struggling with each other, probably biting each other's tail.

Pl. VII. Fig. 3.

Site.

Mari (Parrot, *Le Temple d'Ishtar*, Pl. XLVII, 150, 114).

Description.

A fragment of a vase.

Material.

Steatite.

Location, Level and Date.

Temple of Ishtar. Courtyard Room 20. Level A. ED II-III.

Decoration.

A spread eagle in relief.

Pl. VII. Fig. 2.

Site.

Mari (Parrot, *Le Temple d'Ishtar*, Pl. XLVII, 171, 115).

Description.

A fragment of vase.

Material.

Steatite.

Location, Level and Date.

Temple of Ishtar. Courtyard Room 20. Level A. ED II-III.

Decoration.

In relief, and the objects seem to have been in a bad condition, but still from what we can see, are the legs of two animals and probably the trunk of a tree (see the reconstruction and discussion of these four figures on Pl. VII).

Pl. VII. Fig. 4.

Site.

Mari.

Description.

A small fragment of a vase.

Material.

Steatite.

Location. Level and Date.

Temple of Ishtar. Courtyard Room 20. Level A, ED II-III.

Decoration.

These fragments seem to be part of the same vase, as our reconstruction on Pl. VIII will show.

Parrot is probably right in suggesting that these four pieces (Pl. VII, 1, 2, 3, 4) belong to one vase, and we know that all of them were recovered from the same room (Courtyard 20). The lion headed eagle (No. 3 Pl. VII) representing the symbol of **IMDU-GUD** is known from many sites in the near east portrayed in a similar fashion; for instance on the famous bronze plaque from Al-ubaid now in the British Museum¹⁸, where a lion headed eagle is holding two stags.

After a possible reconstruction, however, the vase may look like the one shown on Pl. VIII. This is divided into three registers, with a fourth band at the bottom, showing triangles. (These fragments showing triangles belong to the same vase and are illustrated by Parrot on the same plate as the rest of them).

Above these triangles the third register shows the architectural scene, while the top shows the two interlaced serpents. The scene in the middle, however, is most interesting, as it has its exact parallel on the silver vase of Entemena of Lagash.¹⁹ Parrot's arguments are not to be accepted that the leg of the animal (Fig. 2, Pl. VII) on the right with its thick dewlap is probably that of a bovine;²⁰ then we are perhaps right in thinking that on this side of the vase the eagle held two lions, as is shown on the silver vase (Fig. 3, Pl. VI). The animal on the left, has comparatively slender and taller leg (Fig. 2, Pl. VII) and so it could probably be a gazelle or an antelope, while in the middle of the two animals is perhaps a tree. If this is true then the scene would probably be two gazelles or antelopes, held by the similar eagle, facing the lions (on the front) across the sacred tree, just as on the silver vase of Entemena, Fig. 3b, Pl. VI, where the gazelles face the two lions. The scene on the topmost register (the interlaced serpents) on this side of the vase, would end in the two serpents biting each other's tail (Fig. 1, Pl. VII).

This reconstruction, if accepted, will confirm the ritual function of these vases, by combining the mythological symbols of sacred tree, and bird, with the stylized

18. H. Frankfort, *A.A.A.O.*, Pl. XXVII, A.

19. *Ibid.* Pl. XXXII.

20. A. Parrot, loc. cit. p. p. 37.

doorways of shrines or temples. It will further help in dating our vases from Mari, on the basis of its comparison with the silver vase of Entemena to late ED III period. Finally it would combine all the three groups of our vases, i.e. a, b and c (see p. 2).

STONE RITUAL SLABS WITH HANDLES

A IRAN

Pl. X. a-b.

Site.

Said to have come from Azerbaijan (Godard, *Athar-e-Iran*, III, 1938, Fig. 210-II, 336-7).

Description.

A small bag-like object (In the Tehran Museum). The object has a handle which, by means of some iron plate, has been crudely rivetted to it in pairs.

Material.

Dark sling stone

Location, Level and Date.

Might belong to an ED period on stylistic grounds, although dated to the Akkadian period by Madame Y. Godard and c. 2500 B.C. by Vanden-Berghe (Vanden-Berghe. *Archeologie-del'Iran Ancien*, 120).

Decoration.

It represents two different scenes. On one side there is a spread eagle with its head turned towards the right. Eagles in this fashion occur on our vases Figs. 1, 2 and 3, Pl V, and also appear often on other objects showing ritual scenes from Mesopotamia. Its body and feet are stretched; between the head and wings can be seen two serpents, with their bodies curled round towards the feet of the bird. The bodies of the eagle and serpents are engraved with small triangle and dots.

The reverse of the object shows the facades of doorways as represented on our vases of Group II.²¹ The scene occurs in two registers divided by a zig-zag band drawn across the middle of the object. A similar band also appears on the neck. The decoration is executed in relief.

Madame Godard's suggestion that this object was the property of a temple which belonged to a solar God, and that it was solemnly carried in certain processions, may well be true in the latter part of this proposition, but the first hypothesis is uncertain.

Y. Godard considers that perhaps it was an import from Mesopotamia.

21. There is one example of a similar object in the Louvre from Susa which has not been decorated.

B. MESOPOTAMIA

*Pl. IX. Fig. 2.***Site.**

Ur (*British Museum Quarterly* IX-L, Pl. XII, 43. B.M. 19700).

Description.

A similar object to Pl. X a-b (Preserved in the British Museum).

Material.

Pale yellowish stone.

Location, Level and Date.

Dated to ED period, again on stylistic grounds. It can be dated on stylistic grounds to ED period, probably ED III, because the rosette and eye decoration is similar to the gaming board of that period, from the Royal Cemetery at Ur.²²

Decoration

Unlike pl. X a-b and Pl. XI a-b this example has been decorated on one side only. Its handle is boldly sculptured in imitation of basket-work, with bindings and punctuated lozenge designs.

The main body of this object depicts eyes, and eight petalled rosettes, rectangular in shape, and the designs are in two rows of four square compartments.

C. SYRIA

*Pl. XI. a-b.***Site.**

Said to have come from Tadmor (Palmyra) (Godard, *Athar-e-Iran*, Fig. 212-3, 310-11) though this origin is doubtful.

Description.

A similar object.

Material.

Dark greenish stone, perhaps steatite.

Location, Level and Date.

Madame Godard believes that it was probably made in the time of Entemena (c. 2500 B.C.). It could be assigned to 2500 B.C. also on stylistic grounds and on the basis of comparison with our vase from Susa Pl. I, Nos. 8 & 9. It is difficult to believe that this object really comes from Tadmor for such an origin would make it without parallel in the mid-Syrian desert, and indeed no contemporary material whatsoever has been found anywhere in Tadmor. Madame Y. Godard believed that it was probably made in the time of Entemena (c. 2500 B.C.) of Lagash, some-

22. Woolley, *Ur Excavations* II, Pl. XVIC, 951.

where in Mesopotamia from where it was imported. A date of about the middle of the third millennium B.C. could be accepted on stylistic grounds and on the basis of comparison with vases from Tepe-Giyan and Susa (Pl. 1. Figs. 8 and 9).

Decoration.

The handle of this object is undecorated, though we find some scratches on the surface of the handle, which could only be accidental.

The body of this object represents two different scenes. On one side of Fig. III, we have palm trees executed in a style similar to that of our vessels Figs. 8 and 9, with the trunks of the trees hatched and carved out in relief.

On the other side it depicts a double tress or plaited ornamentation in style identical with that of our vase from Mari (Fig. 15, Pl. 1) with the difference that there (Fig. 15, Pl. 1) the decoration has holes for inlay or incrustation, whereas the object under discussion has a criss-cross hatched design, which is probably intended to represent two interlaced serpents. Above the double tress is shown a raised band in relief with a criss-cross design, drawn across the object horizontally. The neck is decorated with hatched triangles.

Y. Godard suggested that this object was consecrated to the God of Vegetation.

SUMMARY AND CONCLUSIONS

In our review of these stone vessels we have been able to illustrate and discuss 41 examples of stone vases and three of Ritual slabs, some bearing identical patterns and designs from the Upper-Euphrates to the Indus-Valley. Some of these stone vases recovered in Mesopotamia show a strong Indian influence in symbols and craftsmanship.

The following table will show the number of vases, discovered at sites in the different regions.

Table No. I—Distribution.

<i>Indus Valley</i>	<i>Baluchistan</i>	<i>Persia</i>		<i>Mesopotamia</i>	<i>Syria</i>
		<i>Makran</i>	<i>Elam & Luristan</i>		
2	4	3	7	16	9
Mohenjo-Daro	Mehi	2 Katukan	1 Susa	Ur, Kish, Khafajah, Adab,	All from Mari
	Sahi-Tump	1 Khurab	1 Tepe-Giyan	Tell-Asmar,	
	Dasht Valley	1 Bampur		Tello, Abu-Habba, Tell-Agrab, Nippur	

The above table shows that the greater number of these vessels come from Mesopotamia. Of the nine examples from Syria, all come from Mari: of the Persian examples, three come from the Persian Makran in the Bampur Valley, only

one from Tepe-Giyan and six from Susa. From Baluchistan two are from Mehi, one from Shahi-Tump and one from River Dasht in South Baluchistan. In the Indus Valley, the two examples come from Mohenjo-Daro.

Our second table will indicate the type of material used for these vessels.

Table II—Material.

		<i>Persia</i>			
<i>Indus Valley</i>	<i>Baluchistan</i>	<i>Makran</i>	<i>Luristan</i>	<i>Mesopotamia</i>	<i>Syria</i>
Mohenjo-Daro. Fig. I, Pl. I. Black Slate. Fig. 2 Pl. I. Steatite	Mehi Fig. 3. Pl. I Black-stone and Fig. 4 Pl. I. fine grained grey-stone Shahi-Tump Fig. 5, Pl. I material unknown. Fig. 6, Pl. I from the Dasht River is in Steatite.	Khqran, Fig. 7, Pl. I, Steatite Katukan Fig. I Pl. III, Hard- dark Clay, Bampur Fig. 2 Pl. III Hard-dark Clay	Figs. 9, 10, 11, 12 13 Pl. I & Pl. III Fig. 3 all in Steatite Luristan Tepe- Giyan, Fig. 8 Pl. I Steatite	Ur, Figs. 1, 2, 3, 4 and 5, Pl II all in Steatite Khafajah Figs. 4 Pl. IV, I. & 2 Pl V Steatite Tell Asmar Fig. 3, Pl. V Steatite. Tell-Agrab Fig. 6 a-b, Pl. II. Steatite. Tello-Fig. 2 Pl. IV Steatite Abu Habba, Fig. 3, Pl. IV. Steatite. Adab Figs. 5 Pl. III & I Pl. IV Steatite. Fig. I. Pl. VI. from Nippur in Steatite.	Mari, Figs. 15 16 (Pl. I) 4 (Pl. IV) 2 (Pl. VI) I (Pl. IX) 1, 2, 3, 4 Pl. VII. & Nos. 7 & 8 (Pl. II) all in Steatite

The above table shows that of the total illustrated examples, one is in slate, one is in unknown material, one in Black stone, one in fine grained grey stone (probably these two are in Steatite), two in clay, and all the rest are made in Steatite. Of the ritual slabs, one Pl. IX, 2, is in yellowish soft stone, the other two are in Steatite.

At the beginning of this paper we divided these vases in three different groups based on the decorative motifs used by the craftsman. We pointed out that these groups are not always exclusive, and Group I can be combined with Group II

or Group II designs occur with Group III, but for the classification used here where a vase combines designs from two different groups the vase is classified according to the main design.

These groups are as follows:—

I. Curvilinear and geometric designs. This includes also the compartmented vessels.

II. Architectural scenes.

III. Human and animal figures including Mythological Scenes.

Table No. 3 will show the distribution of these groups:

Table No. 3—Distribution of Designs.

<i>Indus Valley</i>	<i>Baluchistan</i>	<i>S. E. Iran (Bampur)</i>	<i>Elam & Luristan</i>	<i>Mesopotamia</i>	<i>Syria</i>
Group I:-2	4	1	6	5	2
Group 2:-x	x	2	1 (Susa)	5	1
Group 3:-x	x	x	x	6	6

Technique.

It is important to note that the vases from Indus-Valley, Baluchistan and Bampur-Valley are all decorated with incision,²³ almost all the examples from Elam, Luristan, Mesopotamia and Mari are worked in relief.

Compartmented Vessels.

From a study of the compartmented vessels the following considerations arise:

It is clear that while all the specimens from the Indus-Valley and Baluchistan are made with four compartments,²⁴ no compartmented vessel is known outside the Indo-Pakistan borders.

A further distinction can be made among compartmented vessels, regarding the shape and material. From Baluchistan the three illustrated examples (Figs. 3, 4 and 5, Pl. I) are made in Steatite or fine grey-grained stone and are circular in shape. The Indus-Valley specimens²⁵ are made in slate and are square; they also have provision for a lid.²⁶

23. Except Fig. 2 and 6 (Pl. I) which are decorated in relief, but are not local and are regarded as imports.

24. Except Fig. 2 and 4 which certainly are an import from the west.

25. Including Fig. 1 and another which has not been illustrated, because of decorative reasons.

26. One circular vase in White Steatite from Ur. U. 12491, preserved in Baghdad Museum, Iraq (B. 8914) is made with a lid, and is circular in shape.

The shapes of these vessels vary from tall cylindrical vases to small circular vases, including some which are large and globular and others which are circular or square but the most prevailing shape is cylindrical.

There is considerable variation in size.

Summary of Dating Evidence.

Finally, we will briefly summarise the dating evidence, discussing problems concerning their place and period of origin.

I. Indus Valley.

Pl. 1. Fig. 1 from Mohenjo-Daro, and a similar vase from the same site, (undecorated) which has not been illustrated for reasons already shown, were recovered from late levels and are therefore assigned to the late Harappan period, to which a date of c. 1950 B.C.²⁷ may be assigned.

Fig. 2 (Pl. 1) From Mohenjo-Daro was recovered from a very early level, at a depth of 28.1 ft. and therefore belong to the early phases of Harappan culture, assigned by Mackay to c. 2800 B.C. This high dating can however be modified and Colonel Gordon is probably correct in dating this specimen to about 2450-2400 B.C.²⁸

This view is based on comparison with Iranian and Mesopotamian vases (Figs. 14, Pl. 1 and 2, Pl. III) and probability that the Mohenjo-Daro example forms a part of a vase which is an import from the west, belongs at latest to the period known in Mesopotamia as Early Dynastic II-III. De Mequenem dating from Fig. 3 (Pl. III) from Susa II D, c. 2800, inclined Mackay and Field to date Fig. 2 and 14 (Pl. I) to the same period. We would, however, consider the revised dating, of Susa D and ED periods, given by Professor Mallowan (See "*The Dawn of Civilization*" table on page 66) and assign date of about the middle of the 3rd. Millennium B.C. to our Indus-Valley examples.

(Baluchistan) Mehi.

Figs. 3 and 4 (Pl. I) come from Mehi, unstratified, but Dr. Khan has suggested an ED II-III dating for them.²⁹ Gordon, however, has proposed a much lower date of about 2100-2000 B.C. for the incised Mehi vessels, a date slightly higher than our Indus Valley incised specimen,³⁰ (Fig. 1, Pl. I). Gordon has based this view on the following reasons: firstly, that the incised Kulli-Mehi stone vessels are only third hand derivatives of the vessels with architectural scenes (Group II-recovered in Mesopotamia and Iran, with the difference that we do not have architectural

27. Col. D. H. Gordon, *Prehistoric Background of Indian Culture*, p. 72.

28. Mackay's dating is now unacceptable because we have no reason to believe that anything found at Mohenjo-Daro is earlier than ED II, which centres round 2600 B.C.

29. Dr. Khan, ASIC Geographical table, p. 434.

30. Gordon, loc. cit.

scenes on these Baluchi pots). Secondly, that such a specimen occurs at Mohenjo-Daro (Fig. I Pl. I) in a late context, which cannot be dated earlier than 2000 B.C. Hence we would agree with Colonel Gordon that these incised stone vessels at Mehi probably belong to a general date of about 2100-2000 B.C. though whether, as Gordon suggests, they were directly derived from vases of Group II from Iran and Mesopotamia at this period is more open to doubt.³¹ Fig. 5 (Pl. I) from Shahi-Tump. This again is unstratified, but probably Gordon's dating for the whole series of these Baluchi stone vases could be accepted.³²

Fig. 6 (Pl. I) Dasht Valley:- It is unstratified, but probably belongs to an ED III period on stylistic basis. Iran (S.E.) Bampur Valley.

From Bampur, we have three examples; our (Fig. 7, Pl. I) comes from Khurab cemetery, (Fig. I, Pl. III) is from Katukan which was bought from a villager while the one from Bampur (Fig. 2, Pl. III) comes from a burial of Bampur cemetery. Dr. Khan assigns these vessels from the Bampur regions to ED III period, before 2400 B.C.³³ Both Piggott and Colonel Gordon have dated these cemeteries of Khurab,³⁴ to circa or post 2000 B.C. Gordon does, however, suggest a slightly earlier date for the Bampur stone vases,³⁵ at the same time considering the Khurab painted pottery as contemporary both with Bampur painted ware and Bampur incised ware vessels. It is certainly possible that these vases might belong to late ED or Sargonide, by which period the contact between Sumer and the Indus Valley must have been established, through land as well as sea.

Fig. 8 (Pl. I) from Luristan. This was said to have come from Tepe Giyan. It has not been stratified but Herzfeld has dated it to the ED period and it probably belongs to a late ED II or ED III period.

Of the six vases from Susa illustrated here, Fig. 3 Pl. III, comes from Susa II D, in the temple of Susinak, and was previously assigned to c. 2800 B.C. It is, however, possible now, owing to the revised dating³⁶ for the Early Dynastic period in Mesopotamia, that it may be assigned to the middle of the third millennium B.C. Figs. 9 and 10 (Pl. I) may be dated to about the middle of the 3rd. millennium B.C. Fig. II has been dated to about 2500 B.C. while the remaining two Figs. 12 and 13 (Pl. I) have also been assigned to about 2500 B.C.³⁷

These dates have been, however, assigned tentatively to these vessels in the Louvre publication *Encyclopedie Photographique de l'art*.

31. Col. D. H. Gordon, Loc. cit.

32. Ibid. (also see Gordon's Chronological table, Fig. 7, p. 48).

33. Dr. Khan, ASIC. Geographical table III, p. 433.

34. S. Piggott, Loc. cit; p. 218, also Maxwell-Hyslop, Iraq, Vol. XVII, 1955, note on a shafthole. Axe-pic, from Kurab, see Gordon loc. cit.

35. "Not later than 2300 B.C." Gordon, loc. cit.

36. Mallowan, Iraq, Vol. XXII, p. 13. In the present state of our knowledge the whole of the Royal Cemetery may be accommodated into the end of the Early Dynastic period, and particularly that part of it known as ED III with the possibility that it began in EDII. A date of some thing in the order of c. 2750-2500 B.C. with a not inconsiderable margin of error on either side is perhaps in the present state of our knowledge the best we can offer for the bulk of the material in the pre-Sargonide tombs and for commoner's graves that are contemporary with them.

37. See script, pp. 71, 72 and 73.

2. Mesopotamia.

The specimen illustrated from Kish Cemetery A (Fig. 14, Pl. I) was originally dated by H. Field, along with other such fragments from this site, to about 2800 B.C. This date, however, can be modified and be lowered to ED II-III period, which will agree with the general period, in which these vessels were popularly used in Mesopotamia.

All the vases illustrated from Ur, come from the Royal Cemetery; two of them, Figs. 3 & 4 (Pl. II) may be contemporary.

Vases from Adab (Figs. 5 (Pl. III) & I (Pl. IV) have not been exactly stratified, as they only occur in an ancient dump rather than a chronological context, but Dolougaz considers them to belong to the Early Dynastic period.³⁷

Fig. 2 (Pl. IV) from Telloh. This again comes from a pit and so could not be stratified, but probably belongs to ED III.³⁸

Fig. 3 (Pl. IV) from Abu-Habba (Sippar) is not stratified, but probably belongs to the same period as the two examples mentioned above.

Fig. I (Pl. VI) from Nippur. Found in ED II temple and therefore may be dated to about 2700 B.C.

From Khafajah two of the illustrated examples (Figs. 4, Pl. III and 2, Pl. V) were found in Sin Temple IX, room 43-II, which is a pre-Sargonide Temple of ED II period.⁴⁰ Fig. 1 (Pl. V) which is in the British Museum and illustrated and discussed by Frankfort and Mrs. Van-Buren, is unstratified, but Professor Mallowan has dated it to c. 2500-2700 B.C. (*Dawn of Civilization*, p. 69). This view is again strengthened by its comparison with the ones from Tell-Agrab, Nippur and Mari, i.e. Figs. 6 (Pl. II), I (Pl. VI) and I (Pl. IX).

Fig. I (Pl. V) from Tell-Agrab. It was found in the ED II-III temple, while the one from Tell-Asmar is unstratified but Herzfeld has suggested an ED II dating for it.

3. Syria.

All the examples from Mari come from the Temple of Ishtar which was several times rebuilt, and its earliest levels are believed to be as early as Jamdat-Nasr period.⁴¹ Figs. 15 (Pl. I), 16 (Pl. I), 4, 2 (Pl. VI), I (Pl. IX), 7 & 8 (Pl. II), 1, 2, 3 and 4 (Pl. VII) were recovered in cellars 18 and Courtyard No. 20 which belong to level A of the temple. Level A is the last level before the temple was destroyed

38. P. Delougaz, *Architectural Scenes on Steatite Vases, Iraq*, Vol. XXII, pp. 93-94.

39. P. Delougaz, loc. cit.

40. P. Delougaz and L. Lloyd, pre-Sargonide temples in the Diyala-region, Pl. II.

41. Parrot, *Mission Archeologique de Mari*, Vol. I. "Le temple de Ishtar" Pl. XLIX, 267, P. II.

by a Sargonide enemy (either Sargon or Lugal-zaggisi). Therefore, we can conveniently regard them as pre-Sargonide. Fig. 2 Pl. VI though not exactly located, also belongs to this latest level of the temple before it was destroyed, and hence should be regarded of the ED II-III period.

Professor Stuart Piggott has suggested that our Group I originated in Baluch-Makran, and was exported from here both east and west.⁴² He further maintains that the examples, illustrated here, from Mari and Telloh, Figs. 4 & 2 (Pl. IV) respectively belong to these series which originated in Makran,⁴³ and were exported to Mesopotamia and Syria. He also suggests that the two Steatite Cups from Queen Shubad's grave, Figs. 3 & 4 (Pl. II), which have similar decoration to that on a fragment of an unstratified vase (Fig. 6, Pl. I) from the River Dasht-Valley may be regarded as an import to Mesopotamia.

It is possible, however, to question this interpretation of the evidence for several reasons. The Mesopotamian vases are not the compartmented type, and as we have seen compartmented vessels have never been found outside the region of Baluchistan, with the exception of the two examples from Indus-Valley (Fig. 1, Pl. I). These specimens are both different in shape and material from those found in Baluchistan, and have a lid over them. Secondly the number of the cups similar to those found at Royal Cemetery at Ur, (including Queen Shubad's grave) is far greater in Sumer and Elam than Makran. The presence of one single vessel in the river Dasht region (Fig. 6, Pl. I) suggests that it should be regarded as an import from Sumer rather than an export from Makran.

One may therefore assume that of the Group I series, only the compartmented vessels originated in Baluchistan and the Indus Valley. The people of the latter region improved the idea of making such vessels by attaching lids to them.

Of group II, there are only two examples, Fig. 1 and 2 (Pl. III) from Bampur region in clay and a few other fragments of similar vessels in the same material. A fragment of a vase of such a series, (Fig. 2, Pl. I) is the only example from Mohenjo-Daro, which is believed to have been imported from the west. So we are perhaps right in thinking that the vases of Group II originated somewhere in Mesopotamia. As only one vase (Fig. 3, Pl. III) of these series (Group II) comes from Elam, therefore we cannot be sure of their origin in that region, whereas all the vases from Group I found in Luristan and Elam show their local origin.

No vases of Group III have been found outside Mesopotamia and Syria (Mari), and therefore we should suggest that their origin should be somewhere in these two regions.

Finally one may say that the vases of Group II originated in Mesopotamia, and were in use throughout ED II-III, and that the idea of depicting such scenes was borrowed by the people of Iran where it was adopted and used decorated both in bitumen and pottery vessels.

42. S. Piggott, *Prehistoric India*, p. 117.

43. S. Piggott, *Antiquity*, Vol.-XVII, 1943, p. 176.

Undercurrents in the Art of Islam

By R. A. Jairazbhoy

The art in Islam has been a great source of controversy among the Muslims as well as non-Muslims. While the Muslim insistence on the suppression of idolatory has governed their conception of art, the non-Muslims are unable to appreciate the particular motive that inspired the Muslim artists to paint or to express their emotions in other media. That Muslims took art as an enjoyment and patronized art for the sake of art, and not to serve as a handmaid of religion, is clear from the undercurrents in the Art of Islam so well narrated in the general background of world art by Mr. Jairazbhoy, an Agakhani scholar who has devoted his life to the study of Islamic art. The Muslims had no hesitation in borrowing motifs from the contemporary art of the world and using them to beautify their monuments.

Abstractions may stimulate the coldly reasoning intellect, but they can scarcely sustain the interest for long, for the most meaningful art is that which relates to human ends and human themes. With this maxim in mind perhaps we might be more disposed to admit that an art such as that of Islam which for the most part excludes access to human themes might well attempt to circumvent in one manner or another the serious curb upon its choice. It can either do this openly or by disguise. Of the fact that it has done this openly no one is likely to deny. The question of disguise however has not so much as been broached up to now, and this must surely mean that the disguise has succeeded admirably in its intent. Once the principle has been established that veiled in the midst of an obvious form there sometimes lies an incipient one, a whole new vista will have been opened up, and the recognition of the undercurrent themes serves as a source of pleasurable surprise. It will reveal also an unsuspected subtlety in the artist's vision, which on the surface seems so direct and naïve. The credit is no less his if the insinuated form is effected consciously for the process is to a large extent not an overt one. Undercurrent fancies are brought to the surface and find expression because they can no longer be contained. In modern psychological jargon the process has been described as a "recall of the repressed."¹ The anthropomorphism in Islamic art we are seeking to establish here is largely the result of this repression. But a further cause is that the human mind tends to conceive within the terms of its own entity. The vivid imagination of Ezekiel (i, 26) conjures up the glory of God enthroned and engulfed in fire but after all having "the appearance of a man." That book most averse to iconology, the Holy *Quran* (ii, 109) is compelled to refer to "the Face of Allah." Muslim artists did not dare to imagine His face, but as is well known, the imagery in the Holy *Quran* describing Him as a Lamp in a Niche was fully exploited after the 12th century as seen on carpets, wall tiles and on carved marble slabs.

1. E. Kris: *Psychoanalytic explorations in Art*, 1953, p. 309f.

The first of the forms which we wish to establish as being based on the human, is, we contend, apotropaic, and therefore not belonging to the category of an unconscious pattern. An Islamic ivory box probably of the late 12th century now in the Treasury of the Capella Palatina in Sicily has repeated scrolls with various naturalistic figures inscribed within them. One set of these consist of hitherto unidentifiable figures somewhat like musical notations posed one upright and the other upside down (Fig. 1 No. 1). The only remotely comparable figures placed in this manner known to us occur on a Corinthian cup², but the alternating appended and upright figures could easily be that of lilies which were sometimes treated in this manner in Greek art. The one reason for regarding the figures on the cup as possibly apotropaic is that the main subject represented on it is of Hercules fighting the Lenean hydra. Hercules was of course noted in Greek art and literature as fighting and triumphing over all manner of evils. On the Temple of Selinus he is represented holding a pair of Cercopes (mischievous gnomes)³ upside down, and even in Romanesque sculpture he is depicted holding a lion upside down by its heels⁴. The pose and theme is of Sumerian origin where on cylinder seals the hero Gilgamesh is shown holding a pair of lions upside down by their heels⁵ (Fig. 1, No. 2), or he is holding a bull by its heel and wrenching its thigh while his comrade Enkidu holds at bay a rampant lion as on a seal from the reign of Sargon of Akkad, or yet humans are figured alternately appended and upright⁶. There is a strong possibility that what is implied is not only the victory of the hero (victory and defeat being still signalled by thumbs up and thumbs down in our day), but also victory presaged to the owner of the seal. That the type has survived into mediaeval times is suggested by a Byzantine ivory casket representing scenes from the life of David where a helmeted figure holds upside down by his heel a youth, and pierces his belly with a dagger⁷. The identification of our theme on the Islamic ivory box as prophylactic would become feasible if we could show its possible counterpart in Islamic literature. A prominent example that comes to mind is the turning upside down of the Crusader's cross on the Dome of the Rock by the Muslims. If a modern interpreter is correct, this was done "to perpetuate the victory by sympathetic magic."⁸ The same meaning may have been implied by the burial or embedding in the ground of foreign gods. Jacob for instance buried the foreign gods of his household at the foot of the sacred terebinth at Shechem⁹ and we may cite the well-known instance when fragments of the stone idol of Manat were taken from Somnath in India to Ghazni in Afghanistan and embedded there in the steps of the Mosque in 1023¹⁰. Stele carved with the symbols of Babylonian deities and a figure of the King worshipping them were actually recovered from the steps of the Mosque of Harran¹¹, and what is perhaps significant is that these were turned upside down.

2. Perrot and Chipiez: *Histoire de l'art dans l'Antiquité*, ix, Fig. 364.

3. W.P. Perry: *Greek and Roman Sculpture*, Fig. 22, c.f. *Revue Archeologique*, 6e Ser. XLV, Apr-Jun, 1955, Fig. 6.

4. Crichton: *Romanesque Architecture in Italy*, 1954 Pl. 38.

5. J. Baltrusaitis: *Art Sumerien, art roman*, p. 65, Fig. 34a.

6. W. Otto: *Handbuch der Archeologie*, 1939, Taf 145.

7. A. Goldschmidt and K. Weitzmann: *Die Byzantinischen Elfenbeinskulpturen*, 1931, I, No. 123.

8. R. Ettinghausen: *Unity and Variety in Muslim Civilization*, Ed. G. Grunebaum, 1955, p. 118.

9. c.f. A. Lods: *Israel from its beginning to the 8th century*, 1932.

10. S.R. Sharma in *Indian Historical Quarterly*, ix, 1933, pp. 935-6.

11. D.S. Rice in *Illustrated London News*, Sept. 21, 1957, p. 466 f.

Our next consideration will be to examine the limits to which early Islamic art went to conceal designs based on the human figure. In a house in 9th century Samarra a stucco wall revetment¹² (Fig. 1, No. 3) has a bas-relief figure which seems to us to be basically a human form with uplifted arms. In degree of stylization the figure is comparable to the hilt of a bronze sword from the necropolis of Hallstatt (700-500 B.C.) in Central Europe (Fig. 1, No. 4)¹³. The gesture may be purely one of bravado or strength as companion sword hilts seem to confirm, but the Samarra figure would have quite another connotation. The figure of a man with upraised arms seen in profile stood as the Egyptian hieroglyphic for "pray, worship, adore, entreat, praise"¹⁴. (Fig. 1, No. 5)¹⁵. The Egyptian Book of the Dead (Ch. CLXV) refers to the god of the uplifted hand over whose figure the words of power were to be recited¹⁶. Some Babylonian prayers were also recited with arms uplifted¹⁷. The posture became typical in Coptic sculpture whether in the Virgin "Orante" or Daniel with the lions, or St. Menas flanked by adoring camels¹⁸. Raised arms seem to have become an early Christian attitude of prayer as evident in the apse of St. Apollinare in Classe at Ravenna. A whole row of such repeating figures is later found in the Romanesque church of St. Symphorien in S. W. France. At Samarra such a figure would not be surprising since the Muslim prayer was opened by raising the hands repeatedly to the sides of the head.

Another form based on the human figure¹⁹ at Samarra is winged with head and body rudely delineated giving in one instance the effect of a sphinx frontally seen (Fig. 1, No. 6). On a second millennium wall-painting from Nuzi north of Samarra a bull with wings is in this manner frontally depicted (Fig. 1, No. 7)²⁰. Moreover the winged figure does not altogether disappear in Islamic art. A version of it occurs as a patterned prolongation of inscriptions at the 11th century Moorish Mosque of Aljaferia at Saragossa (Fig. 1, No. 8)²¹, whilst a series of more flamboyant winged figures form a grid over a painted faience Ottoman jar of the 16th century (Fig. 1, No. 9)²². The first case might only be a variant of a winged palmette anthropomorphized, but the second one is likely to have been the design of a miniaturist fond of painting angels such as are frequently found in the art of that period. The latter may be conceived as forming a protective net around the jar. This protective aspect is more likely to have been intended of the ghouls and grotesques insinuated in ornament that we shall now examine. With reference to this we have the word of Plutarch that strange or ridiculous forms serve to ward off witchcraft or fascination, and that is why the horrible face of the Gorgon was used as an amulet against the evil eye, as Lucian expressly says²³.

12. House xii. room 7 c.g. K.A.C. Creswell: *Early Muslim Architecture*, II .Pl. 72e.

13. J. Pijoan in *Summa Artis*. VI. Fig. 372; and cf. Dechelette: *Manuel d' Archeologie*. 1927. III. P. 110. Pl. vii. Fig. 280-2, and IV. Figs. 473-4.

14. D. Diringer: *The Alphabet: a key to the history of mankind.*, 1949. P. 60.

15. E.A.W. Budge: *Egyptian magic*. 1901. p. 122.

16. L. W. King: *The prayers of the lifting of the hand*. 1896.

17. J. Pijoan: *op. cit.* CVII. Figs. 206, 207, 209.

18. House XII. N.W. Corner. Creswell: *op. cit.* II. Pl. 72b., and cf. *op.* 238.

19. H. Frankfort: *Art and Architecture of the Ancient Orient* 1954. Fig. 65.

20. G. Marcas: *Manuel d' Art Musulman*. I. Fig. 235.

21. F. Sarre: *Meisterwerke* II. 115.

22a. F. T. Elworthy: *The Evil Eye*. 1895. P. 158. No. 259.

Strange and astonishing indeed is the result of isolating certain seemingly abstract ornamental forms in Islamic art. The interplay of lobed forms in the decorative soffit of an arch at the entrance gate known as Bab Lalla Rayhana (1293) at Kairowan²² upon closer inspection turns out to be the schematic representation of a wildly gesticulating man or demon no doubt warding off the evil eye by its own threatening presence (Fig. 2, No. 10). A closely allied figure survives until the 18th century on a Caucasian (Daghestan) silk embroidery on cotton²³ only here the outlining of the figure forming part of a quadrant composition is spiny which imparts to it a dessicated look (Fig. 2, No. 11). The nostrills flare, the eyes open wide and again the arms rise in an imperious attitude.

The two volutes of Ionic type capitals often served as the "arms" of grotesque heads. An excellent example of this is to be found in the fragments of a frieze from a sanctuary of the first century A.D. at the Roman forum (Fig. 2, No. 12).²⁴ A kind of Siamese head with feathered headdress rises over the opposed volutes which whirl over and contain rosettes. This category of design, that is a head between volutes, was revived on Islamic Moorish capitals. In two cases some sceptics would not admit to their being the lineaments of a face on the junction block between the two scrolls of the capitals,²⁵ but they may be more disposed to accept this if they were to compare them with an 11th century water basin from the Palace of Alamiya near Cordova where the heads between volutes are naturalistically treated and therefore recognizable as being those of antelopes and lions (Fig. 2, No. 13).²⁷ This at least confirms that the practice of placing heads between volutes was known to the Muslims. It is therefore not unlikely that a capital with the name of Abdal Rahman II now in the Museum at Madrid is of this class (Pl. I, No. 14). Here the two eyes are composed of large rosettes and the remainder of the face is symmetrically treated. Another capital of this class from the mihrab of Abdal Rahman II is more subtly disguised (Fig. 2, No. 15): it is more mask-like, more caricatured.²⁸ But again it is possible to identify it by resorting to comparisons. At the Monastery of Ripoll a capital in the Romanesque cloister (Pl. I, No. 16) has a bearded face intruded between the volutes and the folds of the body and arms carved so as to resemble the drape of a gown. A face remarkably reminiscent of this occurs on each of the two wings of an eagle painted within a Persian faience bowl (Pl. I, No. 17). These faces are so strikingly apparent that it is amazing how they could have been overlooked. But this, alas, is true of a great many examples of which we, in this paper, can instance only a few.

Already in that early Muslim monument the Dome of the Rock (A.D. 691) in Jerusalem, the grotesque face appears through the anthropomorphism of foliage

22. *Symposia*. V, 7; cited by F.T. Elworthy: *The Evil Eye*, p. 143.

23. Marcias: *op. cit.* Fig. 283.

24. Victoria and Albert Museum. No. 401. - 1906.

25. Gusman: *L'Art decoratif de Rome*. Pl. 90.

26. One is a capital of 960 A.D. at the Archaeological Museum at Madrid (E. Kuhnelt: *Maurische Kunst*. Pl. 17A.) and the other is a 12th century capital from Tinnal. (Marcias: *op. cit.* Fig. 205. cf. and example in a Carolingian Bible. (A. Boinet: *La miniature Carolingienne*. Pl. XXVII).

27. M. Gomez-Moreno: *Ars Hispaniae*. Fig. 252 A.

28. *Ibid.*: Fig. 51.

motifs. It occurs in the mosaics situated in the intermediate octagon, and could scarcely have been identified but for the convenient examination made possible by modern photography.²⁹ The floral form is regarded in profile with the flower bud treated as though in vertical section (Fig. 3, No. 18). The details within the latter have nothing in common with floral forms, and there appears instead a face in a halter and the mouth pursed in a whistle. Later in Omayyad sculpture at the palace of Khirbat al Mafjar naturalistic human heads are represented growing out of acanthus leaves,^{29a} and in English medieval churches human faces rise out of the midst of foliage on bosses at the intersection of ribs.^{29b} We are reminded of trees in the Arabian Nights that "bore human heads on stalks of hair instead of fruit."^{29c} Painted on the tie-beam of the Aqsa Mosque adjacent to the Dome of the Rock occurs another most unmistakeable face (Fig. 3, No. 19) — smiling eyes within a heart-shaped leaf outline.³⁰ But if this were intended to be disguised it has succeeded in its purpose for another figure carved in low relief on a tie-beam has been partly adzed away because it was the figure of a man.³¹

In the Abbasid capital of Samarra (836-82) on the banks of the Tigris it has been argued that animal or human figures could scarcely have been disguised out of religious scruples since here are to be encountered frescoes painted in a perfectly natural manner.³² But this argument is not conclusive since it is conceivable that painting of human figures may have been tolerated in the privacy of the royal palace but not in the dwellings of the populace. Carvings in the round would undoubtedly have come under censure immediately after the heresy of Caliph Mu'tasim's general, Alafsin. In about the year 840 Alafsin was tried at Samarra and found guilty of clinging to vestiges of the faith of his forefathers. Although he defended himself by claiming that he sought only the wisdom of the Persian scriptures "and ignored the rest," a search in his house revealed "grotesque figures and other things of that ilk along with images and similar things."³³ The fearful end of this idolator must inevitably have had a corrective influence on the citizens of Samarra. But the medium of moulding in stucco for wall revetment was so facile and therefore so tempting to the imagination that disguise in designing was extensively adopted. A reminiscence of the human shape cannot be condemned as idolatrous precisely because it is elusive, apparent only to those who have been admitted to its secret, and in any case incapable of direct proof. Moreover, if recognized, the accused could have cited the cousin of the Prophet who suggested to Persian artists in a *Hadith* that representations would be permissible if they would truncate the head of animals (to rob them of life) and then to treat them in the manner of flora.³⁴ Whatever the reason for dissimulation the disguised grotesque occurs frequently in the stucco revetments of Samarra particularly in the shapes

29. Creswell: *op. cit.* I. Pl. 16. b. cf. also Pl. also Pl. 5a.

29a. *Quarterly of the Department of Antiquities in Palestine* 1944-46. P. 16. Pl. X.e., g.

29b. G. Grigson interprets the heads as the May King, "the sacrificial victim of the Spring." (*Country Life*, Oct. 21, 1954. pp. 1356-7).

29c. *The Thousand and One Nights*. tr. Mardrus and Mathers. II p. 470.

30. R.W. Hamilton: *The structural history of the Aqsa Mosque*. 1949. Pl. XLI.

31. *Ibid.*; p. 87. Pl. XLVI, 2.

32. Aga Oglu in *Art Bulletin*. September 1954. p. 199.

33. Al Tabari: *The reign of Mutasim*. ed. Marin. 1951. pp. 115-23.

34. Cited by C.J. Lamm: "The Spirit of Moslem Art" *Bulletin of the Faculty of Arts*. Cairo. III. Pt. I. pp. 1-7.

that come under the category of reciprocal and reversible. Artists sophisticated by long serving a Court could scarcely have conceived populations of such fantastic beings as are encountered in the stuccoes. No doubt at this time the artists were menial types drawn from the lower classes. It has been suggested that Caliph Mamun called his craftsmen vile precisely because they consisted of *mawali* and *dhimmi*.³⁵ But the art forms to which we refer are by no means vile, for though they are grotesque they are by no means degenerate. Indeed some would consider them vigorous, beautiful in a bizarre sort of way, and striking in every possible sense. The creator of such art must have been "a deeply-stirred and dreaming man whose brain projects impossible shapes to symbolize the perturbations of his spirit".³⁶ But while the writer of this view denies that Islam could achieve the grotesque since it lacked the deliberate application of humour in this realm, he is at any rate aware of the gigantic proportions achieved by the fantastic in Islam, and he refers to such familiar examples as Jinns, ghouls, princesses transformed into parrots and immense birds brooding over treasures in the wilderness. Another writer has remarked that caricature was disallowed in Islam where historical human beings were involved^{36a} and while this is eminently true it does not at all explain those forms in Islamic art which are as comic and as queer as any in the art of caricature. Muslim artists may have been denied the opportunity of taking liberties with their human subjects, but the miniaturists had no compunction against caricaturing the landscape and gave to rocks and scenes distinctly visible human and animal faces.^{36b} Art such as this has been described as exemplifying "the principle of fusion," or, "the mobile interpenetration of the animal, plant and mineral world."³⁷ But this is a late manifestation, and we are here concerned with tracing the strands of anthropomorphism in the abstract art of early Islam.

An interesting pattern attained with an economy of effort at Samarra consists of confronted S—scrolls with a rudimentary face inscribed between (Fig. 3, No. 20)³⁸ Further between each pair of scrolls the space is filled with an exactly similar inverted face. With the insinuation of an extraneous motif the otherwise quite unexceptional scrolls take on a new interest. The closest analogies to such forming of faces by means of scrolls and filler triangles seems to us to be encountered in the art of the pre-historic north. For instance on an iron scabbard of about the 6th century B.C. from La Tene now in Neuchatel,³⁹ a wolf-like face is formed by seemingly aimless lines (Fig. 3, No. 21). The design in fact appears to us to be a more abstract version of a part of the Maikop belt⁴⁰ which, it would seem, represents an owl, perhaps the messenger of death, attacking the head of a man (Fig. 3, No. 22). It may have served as a warning to opponents to beware of the death-dealing wearer of the belt. The design of the La Tene scabbard and that on the Maikop belt may be quite independently conceived, but it is well to remember

35. Aga Oglu: *op. cit.* p. 192; and G. von Grunebaum: *Medieval Islam* p. 182f.

36. John Aldington Symonds: *Essays Speculative and Suggestive*, 1907, pp. 156-60.

36a. E. H. Gombrich: *Caricature*, 1940, pp. 5-6.

36b. e.g. *The Shahnama* of 1371 in the Chester Beatty Collection.

37. L. Bronstein: *Bulletin of Iranian Art and Archaeology* June 1938, p. 227.

38. E. Herzfeld: *Der Wandschmuck der Bauten von Samarra und seine Ornamentik*, 1923, Abb. 120

39. J. Pijoan: *Summa Artis*, VI, p. 461.

40. E. H. Minns: *The Art of the Northern Nomad*, Pl. XVI A.

that the Celts of the West were beholden to the Scythians and dwellers of the Caucasus for such metalwork objects as ornamental torcs, jug handles, horsetrappings and the use of red enamel inlay on bronze.⁴¹

To resume our analysis of some of the Samarra stuccoes we may observe here that apart from the last example cited which characterizes the principle of interchange, there are others in which the patterns are dovetailed or interlocked, and in these too the faces form a diaper repeat. In one example⁴² the notched arrowhead forms are built up by fitting them together like scales. The parallel lines of their margins keep the forms equidistant from one another; with their faces they are reminiscent of circus clowns (Fig. 3, No. 23). In another rather ingenious example,⁴³ the enigmatic forms are fitted between rows of rosettes (Fig. 3 No. 24). These rosettes are horizontally conjoined though vertically staggered which results in leaving equidistant interspaces. It is in these residual spaces that the forms are fitted together in mosaic fashion. The forms between the rosettes are upside down and resemble bats in flight, while the forms above each rosette are funny faces with pits sunk into the plaster serving as eyes. The idea of reciprocating forms is nowhere more advantageously worked out as here.

Certainly the facility of working in the medium of plaster may have contributed to the temptation to insert here a pair of eyes or barely identifiable mouth or nose. To the artist's mind the result would be harmless for scarcely any one would be any the wiser. Who would observe one leaf shape in the midst of an intricate mass of floral ornament? The face at the base of a carved stucco leaf at the Mosque of al-Guyushi (1085) in Cairo⁴⁴ could not have been better disguised for it is still difficult to decide whether it was fortuitous or intended (Fig. 3, No. 25). Or might it have been executed by an artist contemplating the carving of a head of a steer such as is found on a monument in the same city dating from only two years later? Conjectures of this nature are not altogether valueless for they reduce the possibilities in lieu of certain answer to a problem impossible of solution.

Where the medium is a more deliberate and arduous one such as textile we can safely discard the possibility that form was accidentally contrived. A case in point is the border motifs in an Islamic Tapiceria del Pirineo.⁴⁵ The faces with round oggling eyes (Fig. 4, No. 26) are paralleled only by the creations of Disney, though the purpose of the former may be quite the opposite of amusing. Again the nearest parallel to this facial structure, a frieze in S. Miniato al Monte in Florence, is executed painstakingly in the medium of coloured marble mosaic (Pl. I, No. 27). Confronted S-scrolls in white outline the schematized faces, and each head is joined to the next at the base curl over which rises a leaf form exactly as in the Tapiceria. It is curious that the animal mosaic pavements of this very church are suspected to have been based on textile motifs and if this is true it may well explain the remarkable resemblance of the two designs.

41. P. Jacobsthal: *Early Celtic Art*, I. pp. 153-60.

42. Herzfeld: *op. cit.* Abb. 120.

43. *Ibid.*: Abb. 128.

44. K.A.C. Creswell: *Muslim Architecture in Egypt*, I. Fig. 80.

45. *Archivo Espanol de Arte*, July-Sept. 1954, Pl. 8.

We hinted that the seemingly comic faces might have had quite a serious purpose. Their grins might be the leer of ghouls such as the Lilith figures of the Assyrian monuments, and their purpose may be to fend off evil by means of their own evil countenance. An inscription on a mosaic of Oceanus represented with large staring eyes states in so many words that his visage was intended to "shatter malevolent hearts and drive the imprudent tongue from this place."⁴⁶ The purpose of the beast masks with great protruding eyes on ancient Chinese bronzes has not been conclusively established, but a writer of the 3rd century B.C. reports that the image of the *T'ao-t'ieh* was intended "to warn people that the hour of disaster was at hand."⁴⁷ For all we can tell the face with pendulous eyes and teardrop nose among the stuccoes of the Mosque of Ibn Tulun (Fig. 4, No. 28)⁴⁸ was conceived by the artist as such a forbidding figure. And yet this effigy is not half so fearsome as its counterpart in Iran at the Imam Duvazda in Yazd (Fig. 4 No. 29) executed some considerable time later in 1037.⁴⁹ It is a demon that wards off evil from the most sacred spot in the edifice for it occurs in the tympanum over the mihrab niche itself. How a powerful face could have gone undetected in such a hallowed position is most baffling to us. The masterful whirl of lines produces something of the fury of its soul, and in its freely flowing lines calls to mind the so-called "beast" masks on the base of the handle of bronze vessels. One such example at the Museum of St. Germain⁵⁰ is beautifully stylized with arching eyebrows and tear drop eyes (Fig. 4, No. 30). On another early Celtic bronze vessel⁵¹ the face at the base of the handle is framed by eyebrows and side curls executed with a fine flourish (Fig. 5, No. 31). Here again the nearest affinity is with an object produced in Islamic workshops. The base of the handle of an inlaid brass ewer from Persia C. 1200 B.C.⁵² not only continues the idea of treating it as a beast face, but has round staring eyes (Fig. 5, No. 32) like its Celtic prototype. The "face" of the Persian ewer is however insinuated among arabesque foliage, and there is the bare possibility that the two members rising above its "shoulders" are intended to be arms supporting the handle base. On the forehead appear what might be a pair of horns which suggest that it is intended to be a bovine face. Bull's horns are at any rate clearly visible stemming from the beast head carved on the wooden Ghaznavid door (1030) now at Agra.⁵³

Another bovine face cleverly disguised amid palm and the scrolls occurs in the cinquefoil mihrab niche of a Mosque at Mosul, the Jami al Juwayjati (c. 1200) (Fig. 5, No. 33).⁵⁴ The flared nostrils, the slanting eyes, and the concave outline of the face are unmistakable. Almost with monotonous repetition we have to go to Celtic art again for this type of animal style. The bull's head on the buffer

46. Inventaire des mosaïques de la Gaule et de l'Afrique. III. No. 318. And P. Friedländer: *Documents of Dying Paganism*. 1945. pp. 23-4.

47. cited by W. Willetts: *Chinese Art*. I. 1958. p. 162.

48. K.A.C. Creswell: *Early Muslim Architecture*. II. Pl. 109d.

49. *Survey of Persian Art*, ed. A.U. Pope. IV. Pl. 273.

50. J. Pijoan: *Summa Artis*. VI. Fig. 550.

51. R. Smith: in *Archaeologia* 79. 1929. Pl. f.

52. D. Barrett: *Islamic Metalwork at the British Museum*. 1949. Pl. 7.

53. J. Strzygowski: *Altai Iran*. Abb. 173. See also *Journal of the Royal Asiatic Society*, VIII, 1846, p. 74.

54. R. Ettinghausen: in *Archaeologia Orientalia in Memoriam Ernst Herzfeld*, Pl. X. 2.

end of a Celtic gold torc might have gone unnoticed, so well is it set in the midst of scrolling forms (Fig. 5, No. 34). The conformation of the face and eyes are clearly close cousins of those of our mihrab. There are no doubt likely to be some marked resemblances wherever an animal head is treated frontally in a stylized and symmetrical manner. Such is the case with a little jewel in the form of a "bucrane" found in the Tomb of Childeric at Tournai (Fig. 5, No. 35), excepting that this has a solar whorl on the forehead⁵⁵ and the bull's heads on the Cypriot bowl of the 14th century B.C. incusted with gold and niello.⁵⁷ If it is at all doubted that the sculptor of the Mosul mihrab had a bull in mind as he carved, we cannot allay such a doubt. All we can do is to claim that this was possible since Muslim sculptors had carved bull's heads on monuments in this general region. One example is to be seen in the niches to the right of the Kharput Gate at Diyarbekir which may date from the time of the Abbasid ruler al-Muktadir as suggested by the inscription above (Fig. 5, No. 36).⁵⁸ Another bull's head in this city is to be found on an impost block at the Great Mosque of the 12th century.⁵⁹ Meanwhile the architects from Edessa had carved another bull's head on a corbel at the Fatimid gate, the Bab al futuh (1087) in Cairo.⁶⁰ We cannot be sure that these bull's heads were intended to have any significance, but there can be no doubt that they did have in ancient monuments. The custom of decorating alters, metopes etc. with bucrania is said to have originated from nailing the head of the sacrificial bull to a tree in the holy grove or to the temple wall in Greek times.⁶¹ A rock-cut tomb at Pinara in Lycia has the horned headdress of a bull together with ears above the pointed arched gable over the door.⁶² In the Etruscan tomb at Caere two bull's heads are set above the door, and bull's heads are found again on the walls of Sardinian graves.⁶³ Similarly in the Sahara when ox horns are set over the entrance to dwellings they are held to be for protection.⁶⁴ The skulls of animals carved on the friezes of Roman buildings are maintained to have had the same purpose, "the head was believed to contain its life so the skull became a kind of talisman protecting the building from harm".⁶⁵

Another type of disguised face in Muslim Art would, we feel, have the same function provided we can recognize in it the image of an owl. As at Pinara, the monument in question is a mausoleum, this time that of a Persian saint at Pir-i-Bakran (A.D. 1303-12) near Isfahan. Among the slant-cut stuccoes occurs one⁶⁶ executed with a bold freedom and vigour wherein the wide staring eyes and beak

55. P. Jacobsthal: *op. cit.* No. 70 d.

56. E. Babelon: *Mem. de la Soc. nat. des antiq. de France*, LXXVI, 1922 p. 67 f. The object ornamented "le fronton de la tetiere du cheval du roi."

57. C.F.A. Schaeffer: *Enkomi Alasia*, 1952, pp. 381-9.

58. Van Berchem and Strzykowski: *Amida*, 1910, Pl. III, p.1.

59. *Ibid.* pp. 55-65.

60. K.A.C. Creswell: *Muslim Architecture in Egypt*, I, Pl. 66, b.

61. M.P. Nilsson: *Geschichte der griechischen Religion*, I, p. 79.

62. Perrot and Chipiez: *Histoire de l'art dans l'Antiquité*, V, 1890, p. 378, Fig. 265.

63. F. Altheim: *A history of Roman Religion*, 1938, p. 70.

64. G. F. Kunz: *The Magic of jewels and charms*, 1915, p. 346.

65. F. Granger: *The worship of the Romans*, 1895, p. 242.

66. R. Ettinghausen: *op. cit.* Pl. XIII, Fig. 2.

of a bird stand out from the palmette scrolls (Fig. 6, No. 37). There is a remarkable stylistic resemblance with a Celtic chariot ornament in bronze dating from the first century A.D. in Yorkshire (Fig. 6, No. 38)⁶⁷. But since the figure is that of a frontally represented horse the wide nostrils and not the eyes are connected with convoluting lines. There is also a general resemblance of the figure at the Persian shrine with animals represented frontally in Scandinavian art⁶⁸, a head of a bird carved in basalt (c. 10th century A.D.) from Totonac in Mexico⁶⁹, and the griffin corbels from Nagarjunikonda supporting Buddhist reliefs⁷⁰. The closest analogy however is with the early Celtic owl on the head of a brooch from Mainz (Fig. 6, No. 39)⁷¹. There is no need to point to any specific features in common between these two figures, for we believe that their mere juxtaposition should be enough to suggest that the shrine face could be that of an owl's. True there is no vestige of wings as there are on the brooch, but on another very striking stucco in a tympanum at the same Persian shrine⁷², is an unmistakable schematized bird with wings outstretched (Fig. 6 No. 40). Eagles with outstretched wings had been painted in contemporary manuscripts⁷³, while an owl carved in plaster was found at the Muslim site of Cabra in North Africa⁷⁴. An owl in the context of a mausoleum would be certainly fitting for in ancient Arabia the owl was traditionally held to be an emblem of human incarnation, and spirits departed from the body in this form⁷⁵. Owls were connected with death at a very early date in Mesopotamia, for a winged female nude goddess with eagle's talons for her feet on a terracotta of the Sumerian Larsa period is represented flanked by a pair of frontally carved owls⁷⁶. The talons suggest that she snatches away the souls of humans to the underworld (or to the land of shade symbolized by these night birds, the owls), and she is therefore the prototype of Lilith. No wonder then that the owl became synonymous with evil, and in one text spirits were identified with owls who hoot over a city⁷⁷. Among the Romans the owl continued to be conveyor of evil portents; on a mosaic representation of the evil eye it is shown perched on the eye-brow and is being attacked by hostile creatures⁷⁸. A Late Roman amulet with the owl on one side has an inscription on the reverse stating that Christ had vanquished the bird of night⁷⁹. Among the pre-Islamic Arabs the soul (*hama*) was represented in poetry as a kind of bird resembling owl, which flies out of the head of the dead man and hovers about near the grave^{79a}. The function of an owl image in a Persian mausoleum might simply be apotropaic: to keep sanctuary from falling

67. Now at the British Museum.

68. Montelius: *Svenska fornsaker*, Fig. 552.

69. National Gallery, Washington: *Indigenous Art of America*, 1947, Pl. 99.

70. A.H. Longhurst: in *Archaeological Survey of India*, 54, Pl. XXXIX.

71. Jacobsthal: *op. cit.* Pl. 160.

72. Ettinghausen: *op. cit.* Pl. XIII, Fig. 2.

73. M. Dimand: *A handbook of Muhammadan art*, Fig. 14.

74. G. Marcais: *Manual d' Art Musulman*.

75. J. Wellhausen: *Rests arabischen heidentums*, pp. 157, 183.

76. E.G. Kraeling: in *Bulletin of the American School of Oriental Research*, No. 67, p. 16, f.

77. R.C. Thompson: *Devils and evil spirits*, I, p. 50.

78. J. Harrison: *Prolegomena*, 1908, Fig. 35.

79. W.L. Hildburgh: in *Folklore*, LVIII, 1947, p. 209.

79a. A.A. Gevan: in *Journal of Theological Studies*, VI, 1904, P. 21.

into neglect and decay. Finally our claim of identifying an animal motif in an Islamic shrine will be less difficult to accept if we bear in mind that after the 16th century animal subjects actually appear in the shrines of Persian saints, and though they are easily recognizable they are by no means as easily spotted⁸⁰.

A further extension of the disguise principle is "ambiguity," and this is admitted to be a characteristic of Celtic art. To quote one of the best scholars of this style Celtic artists " 'see' the faces into the spirals or tendrils . . . things have floating contours and pass into other things"⁸¹. Illustrative of this tendency we would cite a Celtic bronze with champleve enamel from Polden Hill now at the British Museum (Fig. 7, No. 41). The linear decoration may seem purely abstract and fanciful at first, but once recognized it is quite impossible to avoid conceiving the object as a face with its mouth pursed in a whistle. But the ambiguity comes when we further recognize a pair of confronted preying eagles above the face. There is of course no direct proof that these are intended to be the heads of eagles, but the hooked beaks are clearly reminiscent of those on a nomadic bronze die from Garchinovo⁸² or on a 7th century A.D. gilt and garnet purse lid from Sutton Hoo in Suffolk. In Islamic art similarly in Tulunid woodwork of the 9th century (Fig. 7, No. 42)⁸³, and in a Nishapur stucco of the 10th century⁸⁴, palmette forms are scrolled into birds with hooked beaks, the latter turning toward its tail as in the Garchinovo bronze. On another Tulunid woodwork of the 9th century the disguise is all but abandoned and the beaks of the confronted birds are rightly prolonged into hooks which merge with scrolling decoration. Armed with these prototypes we are enabled to identify another pair of birds (cockatoos?) drinking from a vase. The feeling evoked by these palmetized birds on a column from Kairowan (Fig. 7, No. 43)⁸⁵, brings to our mind a pair of applique adorsed cocks in the art of the northern nomads from Pazyryk (Fig. 7, No. 44), which it would seem to have been the model of Picasso's bronze cock⁸⁶. Thus we may conclude that in temperament Islamic art is akin to styles never before suspected⁸⁷.

We may now proceed to identify yet another type of disguised animal motif in Islamic Art. Within the framing cusp of an arch at the Kutubia minaret (12th century) at Marrakesh⁸⁸ are what we believe to be a pair of fused serpent's heads (Fig. 8, No. 45). Their nearest analogies are the two bifurcating eagle's heads ornamenting the page of a mid-9th century Carolingian Bible (Fig. 8, No. 46)⁸⁹ the "animal lyre" on a Persian silver bowl from the time of Darius (Fig. 8

80. A.U. Pope: "Representations of living forms in Persian mosques," in *Bulletin of the Iranian Institute*, New York, 1946. VI. pp. 125-9.

81. P. Jacobsthal: *Imagery in Early Celtic Art*, 1941. p.10.

82. E. Minns: *The Art of the Northern Nomads*, Pl. II.

83. G. Marcais: *L'art de l'Islam*, Pl. X.

84. M. Dimand: *A handbook of Muhammadan art*, Fig. 54.

85. G. Marcais: *Manual d' Art Musulman*, Fig. 94. B.

86. See in A.H. Barr: *Picasso*, p. 182.

87. The Pazyryk cocks may however go back to Persian prototypes since antithetic birds with reversed heads probably originated in Achaemenid Persia. (A. Roes in *Revue archeologique*, 1950. II. p. 143.)

88. G. Marcais: *Manual d' art Musulman*, I. fig. 226. (from water colour by Hainaut)

89. A. Boinet: *La miniature Carolingienne*, Pl. XCVII.

No. 47)⁹⁰ and a similar design on a Phoenician silver patera (Fig. 8, No. 48)⁹¹ In the first case the design is purely a piece of decorative fantasy in the gripping-beast style, and in the next two the palmette intrusions between the swan-like necks suggest that the design has become a meaningless ornament. But we have reason to think that the Kutubia serpents are not in the same way meaningless. Our basis for this belief is that serpents are coupled in certain examples of Muslim architecture evidently for prophylactic reasons. One well known example is the so-called "Gate of the Two Serpents" at the Citadel of Aleppo (Pl. II, No. 49)⁹² and here the threatening dragon-headed double-ended serpents are interlaced on the archivolt, while another example is at nearby Hama in the mosque of the historian Abul Fida (d. 1331) known as the Mosque of the Serpents, where they are to be found on a colonette of a double window⁹³. On a Muslim talismanic cup where a pair of confronted serpents with jaws agape and interlaced tails are depicted (Fig. 9, No. 50) the inscription says "This blessed cup is useful against the sting of a serpent, scorpion, bite of a mad dog. . . ." etc.^{93a} On the Irish cross of Duleek the pair of serpents interlace in a most puzzling fashion, though again as at Aleppo their tails terminate with suggestions of heads⁹⁴. On the contrary in Islamic art as in ancient Mesopotamia the interlace is always regular and reasonable, and in fact the Aleppo serpents are turning round to bite their own tails in the very manner of the linked serpents on the carved bituminous plaque from Susa. c. 3000 B.C. (Fig. 9, No. 51)⁹⁵. A good example of regularity in Islamic serpent interlace is found on a ceramic plate made in the region of Rakka⁹⁶. Here the bodies of the two serpents are interlooped in oblique S-shapes constituting a sort of knot. The protective snakes on representations of Buddhist stupas e.g. at Amaravati (2nd century A.D.) form simple reef knots (Pl. II, No. 52), and on a vase handle in Rome the bodies of serpents are again formed into such reef knots. It is questionable whether the knotted bodies of the serpents have any significance in the Muslim examples⁹⁷ but it is an undoubted fact that knots for the purpose of magic were forbidden by Islam. Nevertheless an Egyptian talismanic plaque is inscribed with those very *surat* from the Holy Quran which are concerned with blowing into knots⁹⁸. Another possible meaning of the interlacing serpents is suggested by ad-Damiri. He says that serpents copulate by twisting themselves round each other⁹⁹. It is biologically true that serpents, especially vipers, copulate by intertwining themselves, and the intertwined snakes in pre-Sargonid cylinder seals are taken to be the symbol of the god Ningizzida who personifies the generative force

90. P. Jacobsthal: *op. cit.* Pl. b. 14, cf. carved stone dish from Persepolis. (Ghirshman: *Iran*, Fig. 68.)

91. Perrot and Chipiez: *Histoire de l'art* III, Fig. 554.

92. Seirafi and N. Attar: *The Citadel of Aleppo*, (Chiraz Press, Aleppo.) 1954 pl. 7. Moorish writers attest the existence of a Gate of the Serpent (*bab al hanas*) at Valencia. (Makkari: *Analectes*, I, 102, cited by E. Levi Provençal: in *Annales de l'Institut d'Etudes Orientales*, II, 1936, P. 216).

93. M. van Berchem and E. Fatio: *Voyage en Syrie*, 1914-5, p. 177, Fig. 102.

93a. E. Rehatsek: in *Journal of the Bombay Branch of the Royal Asiatic Society*, 1875, pp. 150-3.

94. F. Henry: *La sculpture irlandaise*, Fig. 41a.

95. *Memoires de la Delegation en Perse*, XIII, 1912, Pl. XXXVII, 8, p. 63.

96. J. Pijoan: *Summa Artis. Arte Islamico*, Fig. 192.

97. In Sumerian examples precisely such braided bodies of snakes are found as in the Rakka plate though only one snake is involved (Legrain: *Ur, Excavations*, Pl. 197.)

98. Reinaud: *Monumens Musulmans du Duc de Blacas*, II, p. 325.

99. *Hayat al Hayawan*; tr. Jayakar, I, p. 634.

in nature (*Ab-u.*)¹⁰⁰ The respected Orientalist whose view this was did not know of the interpretation of the Muslim zoologist, nor did he cite the legend reported by Ovid (*Met.* 6. 114.) that Zeus coupled with Rhea, both in the form of serpents "entwined in an indissoluble knot." Related to this idea might be the Babylonian belief that knots can aid pregnant women¹⁰¹. The suggestion that the paired snakes may have been a sexual symbol in ancient Mesopotamia is strengthened by a clay model of a couch in the Iraq Museum¹⁰² on which "serpents are lying side by side with their heads resting on cushions." In one instance on a cylinder seal a *connubium* scene takes place beside Ningizzida who crosses a pair of serpents before his breast¹⁰³. The theme of the entwined serpent which originates as early as the period Uruk IV is thus regarded as "a primeval symbol of the blessings of fertility resultant upon felicitous marriage."

The intertwined serpent motif is familiar to us from the caduceus of Hermes, but for the figure itself we have to go back to Babylonia. On the libation vase of Gudea (c. 2130 B.C.) of Lagash the intertwined snakes actually have a pole between them, or it may be said that they are wound round a staff (Fig. 9, No. 53)¹⁰⁴. Now although this Gudea vase is dedicated to his god Ningizzida and the serpents may be his symbols, they cannot be regarded as his alone. On late Babylonian cylinders the goddess Ishtar carries a short staff flanked by curving uraeus snakes¹⁰⁵, and it seems that Simios consort of Atargatis was worshipped in the form of a caduceus at Hierapolis¹⁰⁶. The caduceus staff was often carried by gods at Hatra. Intertwined snakes appear later on in South India. One example of a *Nagakal* found near a tank at Ankal (Mysore)¹⁰⁷ has the figure of a running man within the top interlacement suggesting the figure of Hermes himself (Fig. 9, No. 54). On the other hand the rosettes between the other interlacements have no prototypes other than a prehistoric ivory handle from Egypt, which seems to be quite isolated object in this land. Later the interlace of the serpent survived in the hieroglyphic for Apep or A-P-P, the destroyer and enemy of the gods, written as in Fig. 9, No. 54A. But if the prototype of the actual form of the caduceus is to be found in Babylonia, that of the staff of Asclepius is to be found in Egypt where the hawk of Horus-Ra tops the staff intertwined with a snake¹⁰⁹. Now Asclepius, who may have been a Greek hero before he became the god of healing, may have had the snake as his attribute because he was noted for restoring several people from dead to life¹¹⁰. Our reason for this view is that the snake was

100. H. Frankfort: in *Iraq*. I. 1932. p. 12.

101. Thureau-Dangin: "Rituel et Amulettes contre Labartu," in *Revue Archeologique*. XVIII. 1921. p. 167f.

102. E.D. Van Buren: "Entwined serpents," in *Archiv für Orientforschung*. 1935-6. X.p. 54.

103. In one instance on a cylinder seal a *connubium* scene takes place beside Ningizzida who crosses a pair of serpents before his breast. Late cylinder seals portray Ningizzida encircled by serpents or holding a serpent in each hand. (E.D. Van Buren: "The God Ningizzida", in *Iraq*. I. 1934. pp. 71-6. Pls. IXb, Xa-e, XIa,b.)

104. De Sarzec: *Decouvertes*. Pl. 44; C. Zervos: *L'Art de la Mesopotamie*. 1935. Pl. 200.

105. C. Menant: *Glyptique Orientale*. I. P. iii. Fig. 99. p. 165. Fig. 102.

106. Frothingham: "The Babylonian origin of Hermes, the Snake-God, and of the Caduceus," in *American Journal of Archaeology*. XX. 1916. p. 187. Fig. 8.

107. J. Vogel: *Indian Serpent Lore*. Pl. XXX.

108. F. Petrie: "Egypt and Mesopotamia", in *Ancient Egypt*. 1917. d.34.

109. Wilkinson: *Ancient Egyptians*. V. p. 12. Pl. 46. and IV. p. 183. W.R. Cooper (*The Serpent myths of Ancient Egypt*. 1873. p. 11) states that the scepter was transmitted to Greece from Egypt along with 46 hermetic treatises.

110. Appolod. iii. 10 section 3. See E.J. and L. Edelstein: *Asclepius*. 1945.

a symbol of immortality because of its ability to cast its slough thereby renewing its vitality. For instance in the Book of the Dead the deceased pray to become like serpents: "I am the serpent Sata . . . I die and am born again."¹¹¹ According to Apollodorus (III 3.1.) it was from a serpent that Asclepius learned the secret of restoring the dead to life. His staff with which he effected his cures was only slightly different from that of Moses which was of brass and the snake was not wreathed round but was situated on top of a pole. It had the specific function of curing snake bites. (Numbers XXI. 4-9).

Tradition asserts that Hermes thrust the rod between two fighting serpents and thus became a symbol of the settlement of quarrels¹¹². The fact is that originally Hermes had nothing to do with serpents. He apparently developed out of a post or pillar, and in the earliest representations he is a post with a human head¹¹³. A phallic post symbolizing renewal of life was called Herm¹¹⁴, so it must have been a quite natural step to buttress it on either side by related symbols. The staff of Hermes which is only the "willow" or magic staff in Homer, acquired the figure of twisted snakes in the middle of the 6th century B.C., and the name for it, the *cadeucus*, appeared first in Herodotus¹¹⁵. It must have continued to have the same meaning since the *cadeucus* appears as a charm on magic amulets and on terracotta disks¹¹⁶. The interlaced serpents on Islamic monuments have this significance as we have seen.

Another related motif, the serpent with the tail in its mouth, begins its career in Egypt in this very context for it is found on Late Dynastic or Ptolemaic stelae which served to protect against snakes, scorpions, and other noxious creatures¹¹⁷. Later the Greek name *Ouroboros* which was given to such a tail devouring snake came to symbolize either the universe¹¹⁸, or recurring time¹¹⁹, and in one instance on the base of the Antonine column at the Vatican the figure of the winged genius, the *Aion*, who raises the busts of Anthony and Faustina towards heaven between two eagles, combines in his hand the symbol of the world joined to that of eternity, for the globe of the world encircled by signs of the zodiac is itself entwined by the cosmic serpent¹²⁰. At the beginning of the 5th century A.D. Claudian described how a serpent devouring its own tail encircled the cavern of the universe and turned eternally on itself with a circular movement¹²¹. In Egypt where the image arose the encircling serpent was initially conceived as a noose that makes captive all that is inimical. The stelae of the Ethiopian King

111. E.A.W. Budge: *The Gods of the Egyptians*, 1904, II, p. 377.

112. Funk and Wagnall's. *Dictionary of Folklore, Mythology and Legend*, 1949.

113. J. Harrison: *Themis*, p. 365.

114. G. Murray: *Four Stages of Greek Religion*, p. 74.

115. F.J.M. de Waele: *The Magic staff or rod in Graeco-Italian Antiquity*, 1927.

116. D. Levi: "The Evil Eye", in *Antioch on the Orontes*, ed. R. Stillwell, III, 1914, pp. 227-9.

117. Bonner: *Studies in Magical amulets*, 1950, p. 156f. Pl. XXIV, 5, 6.

118. This symbolism might already be inteded by the serpent encircling the Phoenician cup of Palestina of the 7th centry B.C. (Perrot and Chipiez: *Histoire de l'Art*, III, p. 759, Fig. 543.) The serepent with the tail in its mouth occurs in Tutankhamen's Tomb. (*Illustrated London News*, Jan. 7th, 1933, p. 3.

119. Bomen *op. cit.* p. 250.

120. F.Cumont: *Textes et monuments figures relatives aux mysteres de Mithra* 1896, I, p. 80 f.

121. Claudian: *Eloge de Stilicon*, II, p. 424 f.

Piankhi (c. 741 B.C.) tells how the prince of Sais laid siege to the town of Ahnas and disposed his army round it like a serpent with its tail in its mouth¹²². In the Book of Apophis (c. 312/1 B.C.) the motif is once again alluding to destruction: "your tail is in your mouth, you are eating yourself," says the writer to Apophis¹²³. When Horapollo wrote possibly in the 4th century A.D. the Ouroboros may have signified the universe¹²⁴, but in Egyptian religion the symbol stood more as one of hell or abyss. For instance the god Bes Pantheos¹²⁵ stands on the Ouroboros which encloses within it various animals, as on the serpentine plaque from the Kestner Museum in Hanover. Later in Rome the Ouroboros is found on a pedestal on which was a statue dedicated to Mithras¹²⁶. Significantly, the figure of the Mithraic Chronos, usually depicted with wings, lion's head and claws, and enveloped by a snake¹²⁷, has been shown in an early example to be iconographically connected with the Egyptian Bes Pantheos in such specific features as lion's head mask on the knees, open eye on chest¹²⁸, four arms holding emblems and in the accumulation of divine elements¹²⁹. There is no unanimity in the identification of the Mithraic leontocephalus deity as Zurvan-Kronos for other scholars citing Manichaean evidence have identified the figure with deus Aremanius¹³⁰, pointing out further that in the Pahlavi books both lion and snake figure prominently as creatures of Ahriman¹³¹. If that is true then the Zoroastrian Ahriman is related to, and probably originates from the Assyrian underworld demon with lion's head and eagle claws. Again it would seem that the concept of Zervan-akarana, the Aion, was originally a Median concept introduced into Zoroastrian religion, for a pupil of Aristotle confirms that it was a conception of the Medes¹³². This belief that Ahura Mazda and Ahriman both stemmed from the First Principal, Infinite Time, was adhered to by the Zervanite who were regarded as heretics by those orthodox Zoroastrians, the Sassanids. In the Roman context it is scarcely conceivable that the serpent-entwined, lion-headed god is the principal evil, Ahriman. The serpent is not here a purveyor of evil, but a symbol of Time "which devours and consumes everything." On the one hand the multipally interlaced serpent of Babylonian cylinders might have signified infinity, and on the other the serpent winding round the frame of deities signified eternity.

We cannot here relate in full the history of the serpent-coiled deity, but we may at least point to a few early examples. On one Babylonian cylinder seal the two serpents of Ningizzida coil round his body and then rise from his shoulders¹³³.

122. W. Deonna: "Ouroboros" in *Artibus Asiae*, XV, 1952, p. 166.

123. *Ibid.* p. 166.

124. *Hieroglyphica*, I, 2.

125. F. W. Von Bissing: in *Aegyptische Zeitschrift*, LXXV, i, 1939, p. 130, f.

126. Pettazzoni: *Essays in the History of Religion*, 1954, p. 90, Pl. XII, Fig. 12, and Pl. X, Fig. 9.

127. F. Cumont: *Textes et Monuments figures relatifs aux mysteres de Mithras*, 1896, I, p. 74f.

128. However in the Avesta Mithras is described as "the eye of Ahura Mazda" (Yash t. 10.)

129. Pettazzoni: *op. cit.* chapter entitled "The Monstrous figure of Time in Mithraism."

130. Duchesne-Guillemin: *Oermazd et Ahriman*, p. 128.

131. R.C. Zaehner: *Zurvan. A Zoroastrian dilemma*, 1955, p. ix.

132. Spiegel: *Avesta*, I, p. 271, II, p. 119, 125 f.

133. W.H. Ward: *Cylinder Seals of Western Asia*, Fig. 368, b; and E. Porada: *Corpus of Ancient Near Eastern Seals*, 1948, Fig. 386e.

He is completely borne by them as his weight is supported on their erect tails. Next, the snake twines round a goddess from the Hyksos level (17th-16th century B.C.) at Tell Beit Mirsim¹³⁴. The serpent-entwined female figure survives into the Hellenistic period in a late semi-Egyptian image of the Syrian goddess Athargatis¹³⁵. Side by side with these there survives another category of the serpent-entwined motif, beginning again in Babylonia on a *kudurru* or boundary stone¹³⁶, recurring in Greece round the omphalos¹³⁷, or navel stone, and culminating in the Orphic divinity Phanes, the beautiful winged youth born from the primordial cosmic egg¹³⁸. The Mithraic figure of Zervan seems to be protected within the embrace of the snake for on the figure from Ostia (A.D. 190.) the serpent winds six times round the body with its head on the head of the leontocephalic god. Here we have a parallel in the Sanskrit version of the Buddha legend of early century A.D. in which the Naga King Muchalinda winds seven coils round the body of the Buddha to protect him from cold and storm¹⁴⁰.

So much for the theme of the intertwined serpent in its varied manifestations. Our next objective is to show how the process of anthropomorphism invaded Islamic interlaces, vegetable scrolls, and even religious inscriptions. In Sassanian metalwork scrolls sometimes terminate in animal heads.¹⁴¹ The type is revived in the medieval art of Islam. For example animal-headed spirals are to be found in the stucco frieze at the Qara Serai at the Atabeg Badr al din Lulu (1233-59).¹⁴² Not only animal but human figures develop out of scrolls in the 13th century kursi originally from Hama.¹⁴³ An inscription on a metalwork¹⁴⁴ has an interlace developing above and terminating on loving feminine heads placed cheek to cheek (Fig. 10, No. 55). Another inscription from a moulded jar from Nisibin (first half of the 13th century)¹⁴⁵ has a letter forming itself into a rampant serpent (Fig. 10, No. 56), whose form recalls that on a Celtic iron scabbard (Fig. 10, No. 57).¹⁴⁶ In the West, interlacing stylized zoomorphic initials already occur in late 9th century English manuscripts, but they have a quite different character. The next step from the anthropomorphizing of single letters in the Arabic script is to make pictures with whole words and formuli. For example, in 15th-16th century Turkish miniature the letters form Noah's Ark with the name of Allah inscribed on top of the mast.¹⁴⁷ In other instances a cock or a stork is thus formed, or yet Allah's name is intertwined to form a face.¹⁴⁸ We

134. C.Gordon: *Adventures in the Nearest East*, 1957, p. 56.

135. H. Zimmer: *The Art of Indian Asia*, I, Pl. 16 b.

136. Eisler: *Weltenmantel und Himmelzelt*, II, p. 390, No. 1.

137. J. Harrison: in *Journal of Hellenic Studies*, XIX, p. 225 f.

138. E. Panofsky: *Studies in Iconology*, 1939, p. 73 Fig. 36

139. F.Cumont: *op.cit.* 0, 238.

140. N.J. Krom: *The Life of Buddha*, 1926, p. 11.

141. Smirnov: *Argenterie Orientale*, 1909, Pl. 9, Fig. 24.

142. Saree and Herzfeld: *Archaeologische Reise im Euphrat und Tigris Gebiet*, III, Pl. XCVII.

144. D. Barrett: *Islamic metalwork in the British Museum*, Pl. 6,

145. Victoria and Albert Museum, C. 131, 1938.

146. Jacobsthal: *Early Celtic Art*, Pl. 70.

147. E. Kühnel: *Islamische Schriftkunst*, Abb. 80.

148. *Ibid.* Abb. 80-81 17; and C.E. Arseven: *Les Arts Decoratifs Turcs*, Figs. 694, 696, 699, 700.

cannot specify an exact moment when the anthropomorphising of Arabic letters took place but one of the earliest examples must surely be the Bobrinsky bucket from Herat (1163) where on an upper inscriptional register the human figures are imperfectly attached to the vertical letters (Fig. 10, No. 58),¹⁴⁹ and in a lower register the tips of the verticals are actually treated as faces, as a closer look reveals. In a metalwork of c. 1230 the apogee of the animated script is reached, for not only the vertical but the whole letter takes on a human or animal form. Difficult as it is to recognize, it may be imagined how much more difficult it is to read!¹⁵⁰ It would be extraordinary if the anthropomorphizing of letters became suddenly established without any previous tentative approach toward it, and this leads us to suggest that in the twisted Kufic letters (Fig. 10, No. 59) on the early 11th century maqsurat of al Muizzat Kairouan,¹⁵¹ We have the germs of face formulation already at work. But in this instance it would be useless to attempt to convince the sceptic who is never satisfied unless the last 'i' is dotted and the last 't' crossed.

A renowned Islamic art historian has denied (privately) our suggestion that a pottery jar in an illuminated manuscript, the Dioscorides of 1222¹⁵², represents a human face (Fig. 10, No. 60). The round eye may be fortuitous but there is no mistaking the pair of unequal tresses that hang down the belly of the jar. It is to be remembered that Umar Khayyam refers to the articulating clay population standing in rows, and another poet describes wine jars like a row of men drawn up to a dance¹⁵³. Perhaps there is a suggested connection between the feminine face on the jar and the honey sweet medicines it contained. Elsewhere quite other meanings prevailed. In South America the view was that "the clay vessel is a woman just as the earth itself from which the clay is obtained is regarded as a woman."¹⁵⁴ Neolithic pots with female head and breasts have been found in Cyprus¹⁵⁵, while a woman's head is a characteristic design on the so-called face urns of Anatolia¹⁵⁶. A vase from the second city of Troy has a schematized feminine form with two round tabs for the eyes overarched by brows that continue into a nose. There are two larger tabs for the breasts, while the jar handles serve as rudimentary arms¹⁵⁷. The effect is that of a woman carrying a jar on her head. A pot from Chagar Bazar in North Syria found in the Habur level (2000-1700 B.C.) is more subtly contrived for the face is not added on to it, but instead the pot is moulded into a male face. The painted outlines however suggest some sort of mask, and if indeed it were a mask it may have been connected with a ceremony involving ritual libations¹⁵⁸. It has been argued that the Troy face vase is a development of the protoliterate Ishtar symbol from Erech¹⁵⁹, but

149. See F. Sarre: *Meisterwerke Muhammadanischer...* II. 143.

150. D. S. Rice: *The Wade Cup in the Cleveland Museum of Art*, 1955, op. 22f. Figs. 19f.

151. G. Marcais: *Manual d' Art Musulman*, I, Fig. 93.

152. F. Sarre: *op. cit.* I, Taf. 5; and cf. M. Dimand: *op. cit.* Fig. 13.

153. Cite by D. S. Rice in *Arabica*, V, 1958, fasc. 1, 0. 27.

154. R. Karsten: *The Civilization of the South American Indians*, 1926, p. 246.

155. R. H. Lang, in *Journal of the Anthropological Institute*, XII, p. 187.

156. V. G. Childe: *The Dawn of European Civilization*, 1939, p. 41, Fig. 21; and W. Lamb in *Annual of the British School at Athens*, XLVI, 1951, pp. 75-80.

157. Perrot and Chipiez: *Histoire de l'art dans l'Antiquité* VI, Fig. 376.

158. M. E. L. Mallowan: in *Iraq* IX, 1947, Pl. XL, seep. 186 for affinities with other vaseheads of that category.

159. H. Frankfort: "Ishtar at Troy," in *Journal of Near Eastern Studies*, VIII, pp. 194-200.

whether this is true or not we have established numerous examples of female anthropomorphized pots in antiquity to which we wish to add that in the afore-aid Mesopotamian miniature. In order to complete our list of anthropomorphized pots we should not omit to mention that important class of dummy Canopic jars from Egypt with removable heads, human and animal, representing the four parts of the human entrails. For though these jars were too small to contain the viscera, they were no doubt used in burials. Similarly the face urns from Pomerania and Silesia made at the beginning of the Iron Age were funerary in purpose and contained the ashes of the cremated dead¹⁶⁰. The Canopic jars of Egypt appear to have migrated to Etruscan Italy where the terracotta covers of cinerary urns from Chiusi, occurring in well-tombs dating from the 7th and early 6th century B.C., were shaped in human form¹⁶¹. Although the term "Canopic" for the Egyptian burial jars is a misnomer, it is interesting in our context to remember that the classical Canopus from whom these vases were named was the pilot of Menelaus, who was buried at Canopus in Egypt and worshipped there in the form of a jar with a human head and swollen body.

We have passed in review a number of forms in Islamic art—ostensibly abstract but ultimately based on anthropomorphic figures. We have adduced parallels from other cultures to show the kinship in stylization, and to substantiate our claim that these forms indeed derive from human or animal sources. Sometimes the meaning of these forms in the Islamic context can only be guessed by referring to its counterpart in another culture. But there is no need to suppose influences, for the similarity is due to a predilection common to them, and in the case of Islam this attitude derives from anti-naturalism which has mainly been promoted by religious prohibition.

160. Frankfort: *op. cit.*, p. 194.

161. See *Critica d'Arte* I. 18f., 82f.

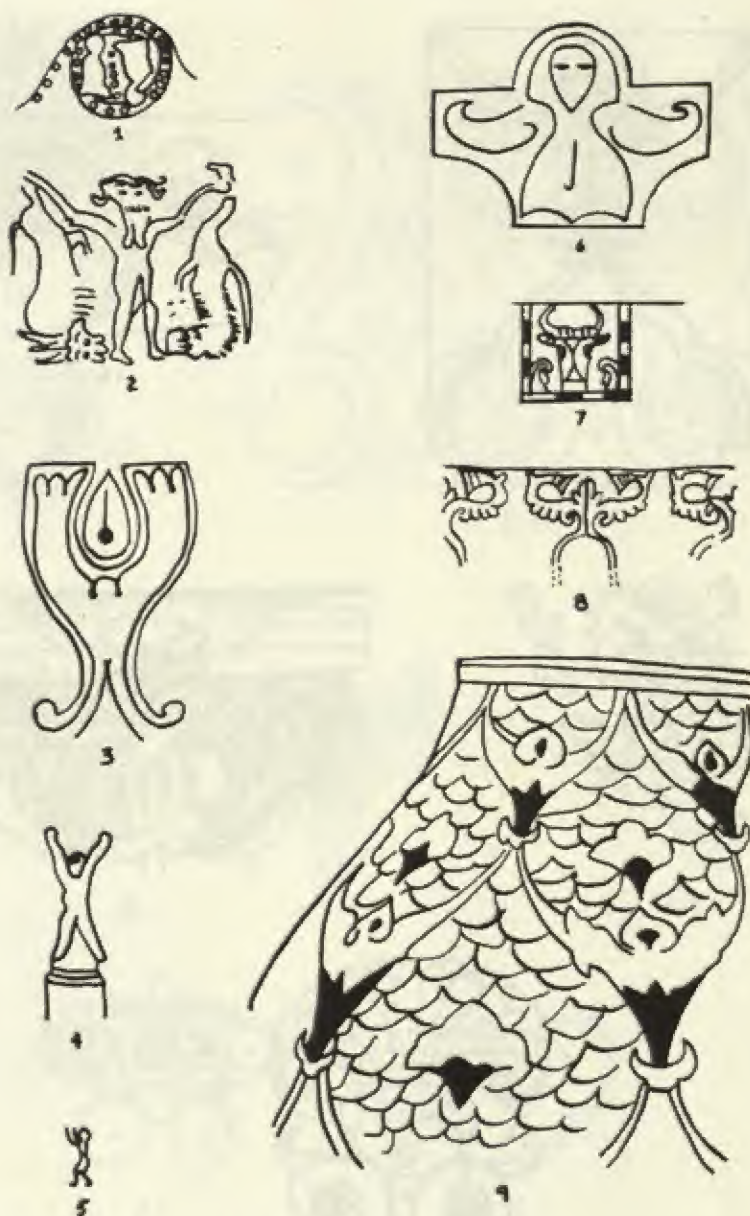


Fig. 1



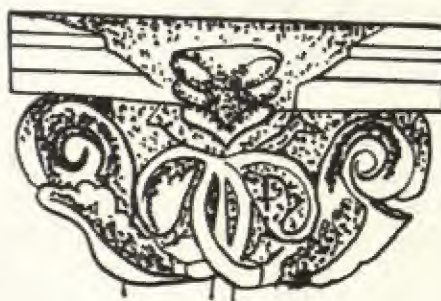
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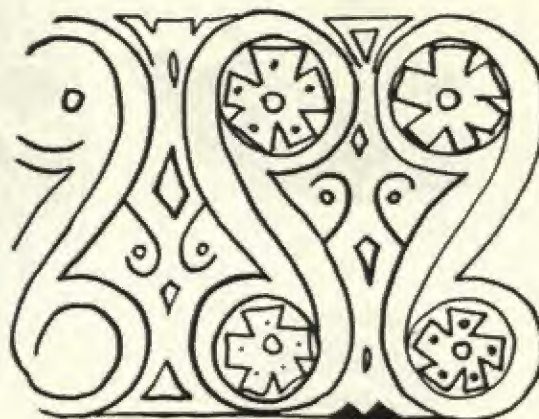
Fig. 2



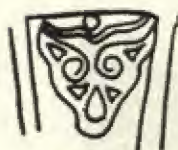
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Fig. 5



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Fig. 4



Fig. 5



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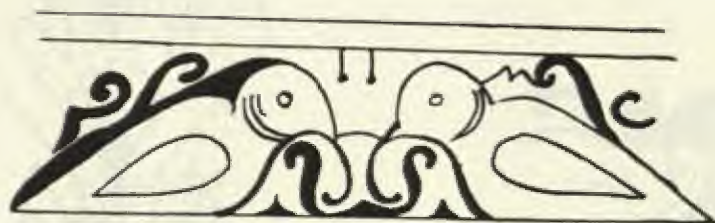


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Fig 6



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Fig. 7



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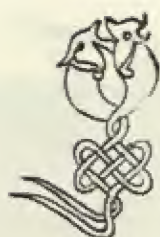


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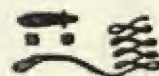
Fig. 8



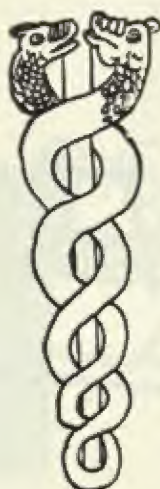
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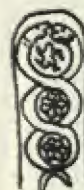
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54.A



53



54

Fig. 9

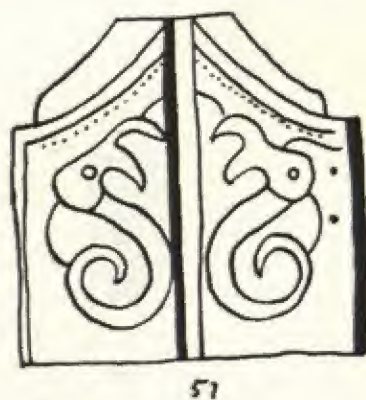
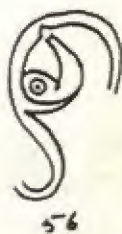


Fig 10



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49

Tochi Valley Inscriptions in the Peshawar Museum

By Ahmad Hasan Dani, Helmut Humbach and Robert Gobl.

Recorded history gives little authentic information on the Islamization of the North West Frontier of Pakistan. In fact the early Muslim conquest of this region still remains to be authenticated. Nay, even the earlier history right from the time the Great Kushanas were overthrown by the advance of the Iranian Sassanids, is known only in bits of information. More and more evidence remains to be gathered by a thorough exploration of this region. Meanwhile three inscriptions are being edited here to throw some light on this problem. Parts I and II of this paper are written by the first author and part III by the last two authors.

I

Three inscriptions, edited¹ here, are preserved in the Peshawar Museum. All of them come from Tochi Agency, between Idak and Spinwam, lying to the west of Bannu — a region which lay enroute the early Arab invasions² in the North West Frontier of Pakistan. They were published without proper edition by Mr. M. A. Shakoor in his small pamphlet.³ For easy reference we name the stones A, B and C.

'A' is Shakoor's No. 49 containing Arabic and Sanskrit texts in the same tablet measuring 24" x 12" (see No. A). The Arabic text is on the upper half and the Sanskrit lower down. The tablet was found in 1907 and was presented to the Museum by Mr. Pears, I.C.S. It was first edited by Mr. Muhammad Hamid Kuraishi⁴ and then re-edited by Dr. Muhammad Shafi.⁵ Mr. Kuraishi also gave the Sanskrit text as read by Dr. Hiranand Sastri, the Government Epigraphist for India.

1. They are edited here with the kind permission of the curator.

2. For a recent discussion of the subject see S.Q. Fatimi, 'First Muslim invasion of the N.W. Frontier of the Indo-Pakistan sub-continent' in *Journal of the Asiatic Society of Pakistan*, Vol. VIII, No. 1 (June 1963), pp. 25-32; and also Lt. Col K.A. Rashid, same title, *Ibid*, No. 2 (Dec. 1963), pp. 25-32.

3. M.A. Shakoor, *A Handbook to the Inscriptions Gallery in the Peshawar Museum*, Peshawar, 1946 (hereafter referred to by author).

4. 'A Kufic Sarada inscription from the Peshawar Museum' in *Epigraphia-Indo-Moslemica*, 1925-26, pp. 27-28 (hereafter referred to by the author).

5. 'ہندوستان کا قدیم ترین عربی کتبہ' in *Oriental College Magazine*, Lahore, Aug. 1942, pp. 44-45 (hereafter referred to by the author).

'B' is Shakoor's No. 15 containing Bactrian and Sanskrit texts in the same tablet measuring 25" x 8". The inscription is divided by a vertical line at 1/3 of its length. The Bactrian writing is on the right portion occupying 2/3rd space and the Sanskrit on the left (see No. B). The stone was discovered at a place called Khazana⁶ about four miles from Mir Ali on the Idak-Spinwam road in the Tochi Agency. It was received from Captain H.A. Barnes, Indian Political Department on 30th July, 1926. Mr. Barnes adds, "There are several remains of ancient forts and buildings at Idak-Spinwam and Shertulla plain. In addition I have had coins brought to me discovered on three sites. The coins were chiefly of Azes I and those of several *Kushana* kings, notably Kanishka I." The inscription has not been properly edited so far. Dr. Hiranayd Sastri, as noted in the Museum file, read a few words like *titame*, *Samvat* 38, *bhūpa* and *putra*. He also suggested that the date should be referred to the *Sāstra* era.

'C' is Shakoor's No. 41. This is in two pieces (See plate C), the larger one measuring 34" x 11". Both the pieces were found together at Sher-talao⁷ in the Tochi Agency and were received from Major Keene. They contain Bactrian text, edited here for the first time in part III, and two lines of Arabic text on the top, greater portion of which is now broken or chipped off. Because of the fragmentary nature the Arabic text does not give any sense.

The use of three languages in the inscriptions is very significant. Sanskrit decidedly proves that the common local language of the educated people was Sanskrit. Hence this was adopted as one of the media, as it was common among the Hindus of the time in India and Pakistan. *Bactrian* is connected with the Shahi rulers of this region, and, as has been pointed out in part III, it was the language used by these rulers in the Pak-Afghan region. The Arabic is the new language introduced in this part by the Arab conquerors. Its use in two of the inscriptions definitely proves that the Arab conquerors had a firm hold over this region at the time when these inscriptions were written.

Three different systems of reckoning dates are given in the inscriptions. The Arabic inscription in 'A' is dated Friday the 13th Jumādā I, 243 (A.H.) = 7th September 857 A.D. which is also Friday. The Sanskrit text of this inscription is dated 2nd day of Kārtika *Samvat* 32 referable to the Laukika or the *Sāstra* era with the hundred digit omitted, i.e. 3932, which is equal to A.D. 856-57 (see part III for the difference). The inscription 'B' is dated on the 7th day of Bhādra *Samvat* 38, i.e. Laukika era 3938 = A.D. 862. It also contains *Bactrian* date 632. After calculation the beginning of the *Bactrian* date can be placed in A.D. 230. In inscription no. 'C' only *Bactrian* date 635, i.e. A.D. 865 has been read. The Laukika era, as Alberuni⁸ informs, was used in this region by the Hindus. The

6. The name *Khazana* is very significant. Such place names are very common in Gandhara. To me it suggests a survival and corruption of the old Hindu Shahi title *Kushana* - *Koshano* - *Khoshano* - *Khojano* - *Khozana* - *Khazana*. The name actually occurs in the inscription.

7. Shertulla or correctly Sher-talao is also very significant. The second part *talao* is the word حوض used in the Arabic inscription A. The name preserves the memory of the old tank construction.

8. Sachau, *Alberuni's India*, Vol. II, London, 1910, pp. 9-11.

Hijra date was decidedly brought by the Arabs, and the Bactrian date can be assigned to the local Kushana rulers, though the reason for its origin is disputed. (See part III).

The historical information contained in these inscriptions is very important. In recent years Dr. R.C. Majumdar discussed the history of the Hindu kings of this region *visa vis* the Arab conquerors on the basis of the Arabic sources, particularly *Futūh-al-Bulḍān* of Al-Balādhurī. After tracing the long-drawn struggle between the two parties, Dr. Majumdar finally concludes: "When the Caliph al-Ma'mun (A.D. 813-833) visited Khurasan, Ratbil paid double tribute to him, but was evidently left unmolested. Al-Ma'mun, however, sent an army against Kabul, probably the Shahi ruler of Kabul, who submitted to taxation and acknowledged obedience. Baladhuri further says that the king of Kabul professed Islam and promised obedience, but he apparently regained independence and apostatized almost immediately after. Next we hear of the conquest of Kabul and Zabulistan by Yakub, son of Lais about A.D. 870. The king of Kabul was made a prisoner while the king of Zabulistan was killed and its inhabitants forced to embrace Islam. Henceforth, Zabulistan ceased to belong to India, either politically or culturally, but Kabul recovered its independence and remained, as before a part of India from both political and cultural point of view till the time of Turkish Sultans of Delhi."⁹

This conclusion of Dr. Majumdar needs considerable revision in the light of the new information. Limiting to the present evidence of the inscriptions it can be safely maintained that Idak-Spinwam region in the Tochi Agency recognized the authority of the Arab rulers at least from A.D. 856-57 and that the Arab officer Hayy bin 'Amār, as given in the present Arabic inscription No. A, had a control over this part. It was under his orders that a tank (تَلَخ) was constructed here for the benefit of the people. Such a humanitarian work could be undertaken by the Muslim officer only when the territory was under his peaceful control. But it seems that the local Government was still run by the local ruler under Arab surveillance. The local ruler called himself *Shahi*, lord or king (*nripa*), the *Kuzula*, the *Kuzan* or the son of *Khojana* or *Kushana* and scion of *Fromo* (or *Phruma*). In the Bactrian inscription we get only one name *Gomo Shahi*, and in Sanskrit we get the name *Navina Chandra Phruma* (For other titles see part III).

It will not be wrong to maintain that these Shahi rulers were one of the branches of the old Kushana Shahi rulers of Gandhara. It is also possible to identify them with the rulers of Zabulistan (i.e. Ghazni region), as distinct from the rulers of Kabul. The latter is called Ratbil (probably Ratna-bala, or more correctly Ratna-pāla) by Al-Balādhurī. The Arabs had their head-quarters in Sijistan, where we read of a long succession of *Walis* being appointed by the Arab authorities. It is from here that through the Zamin-i-Dawar, i.e. the Land of the Gates, of course leading to the then India, the Arabs led their advances into Zabulistan and via Idak-Spinwam into Bannu. The presence of these inscriptions definitely proves the firm control of the Arabs over this region.

9. *The Arab Invasion of India*, reprinted as Dacca University supplement from the *Journal of the Indian History*, Vol. X, pt. I, Madras, 1931, chapter III.

II

In this portion the Arabic and Sanskrit texts of A and B inscriptions are given on the basis of the study made from the original stones in the Peshawar Museum. To facilitate the understanding of the palaeography a chart (Fig. 1) of the Sanskrit letters is given, the letters of the two Sanskrit records are kept separate in different columns. The style of writing in the two records has a close similarity, though the letters in A have simpler forms with a tendency to angularity and those in B maintain roundish style. The alphabet is neither pure Nāgarī nor pure Śāradā. It does not show the simplified Nāgarī forms of this period nor do we have the 'Śāradā character so well known from Kashmir records. The significant forms are of *A, Ka, Cha, Bha, Va* and the numeral seven. The last agrees with the form known from Nepali Buddhist manuscripts.¹⁰ The letters *Va* and *Ba* have the same sign. The reading of the Sanskrit text in B is facilitated now by the decipherment of the Bactrian text.

Stone A

The Arabic palaeography is most interesting. As Kuraishi has pointed out, the writing is somewhat crude. It is strange that the inscription does not begin with *Bismillah*. The style of writing has been described as Kufic. The angularity is noticed in some of the forms of *He*, the lower loop of *Y*, the curve of a few forms of *Nun*, the top head loop of *Waw*, and the emphasis on the vertical teeth of *Sin*, as well as on the verticals of other letters, and finally on the flatness of the horizontals. On the other hand the loop of *Mim* has a full circle and is clearly distinguished from the half circle at the head of *Fe* and *Qaf*. Similarly *He* in the initial also makes a single looped circle, and *Nun* is hardly drawn full. The end of its left stroke is not taken up to complete the half circle but is left like a tail. *Re* and *Waw* have their body curved. These features suggest that the style was influenced by the curved forms of letters. Dots are omitted, and hence the reading creates difficulties.

Text

- | | |
|---|--|
| (2) الفلاح حلى بن عمار تقبل | (1) هذا ما امر عقد ¹¹ هذا ¹² |
| (4) و عقابه ¹³ سو [ع] ¹⁴ و قدر عمله (ع) | (3) الله منه صالح عمله |
| (6) عشرة خلون من جمادى | (5) كتب ¹⁷ يوم الجمعة بثلاثه (ثلاث) |

10. See G. H. Ojha, *Bharatiya Prachina Lipimala*, 2nd ed., Ajmer, 1918, Pl. LXXII, last form under No. 7; Also Buhler, *Indian Palaeography*, (Eng. Tr.), Pl. IX under Mss. style, column XXIV, No. 7.

11. Kuraishi does not read anything after امر This reading is of Dr. Shafi.

12. Dr. Shafi's reads بنا (ع) But the angle of ذ is clear and | is given separate.

13. For the correct reading of the word I am indebted to Haji Muhammad Idris, Head of the Department of Arabic, University of Peshawar. The reading is supported by the following passage in Baladhuri:

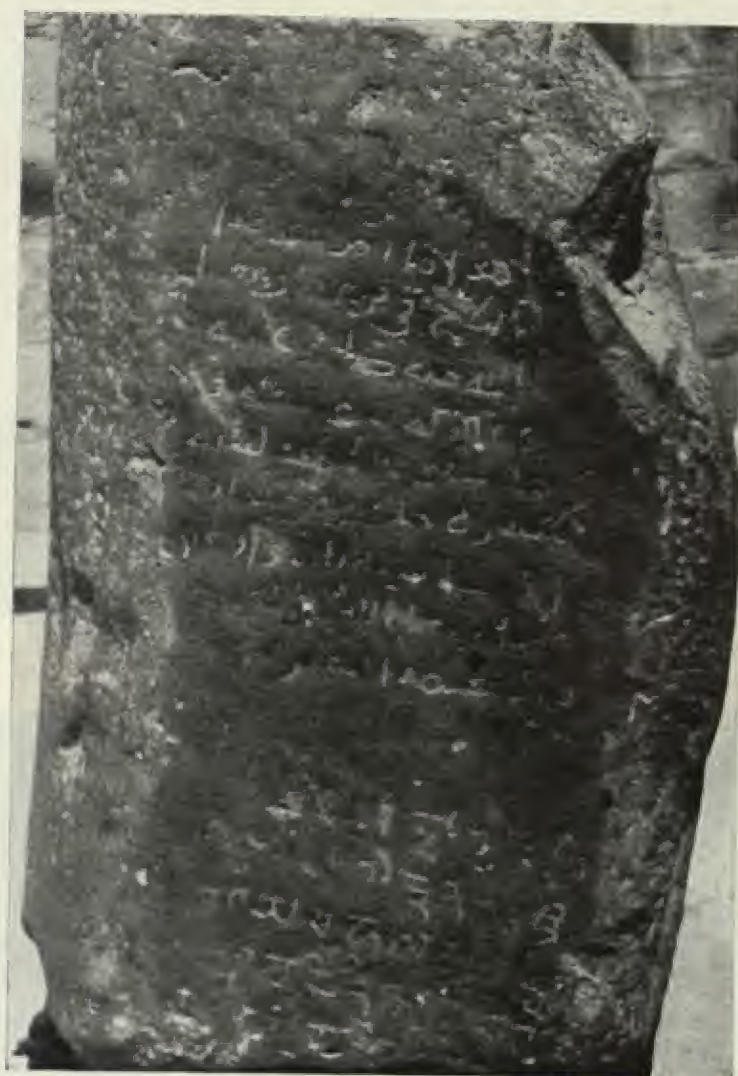
و هو ماء يجرى من نهر يسمى فيضيرى مجتمع له مثل البر كنه في المويته و هم يسون البلاح
P. 445 *Futuh al-Buldan*, Cairo, 1319 A.H.— appears to be a misprint of الفلاح —a word which is Arabicised from تلاب or تلاب

14. Dr. Shafi's reading عمار is preferable. The person may have some connection with 'Abdullah bin 'Amir.

15. Others read as غفر

16. As read by Dr. Shafi.

17. As read by Dr. Shafi. Kuraishi wrongly read as كان

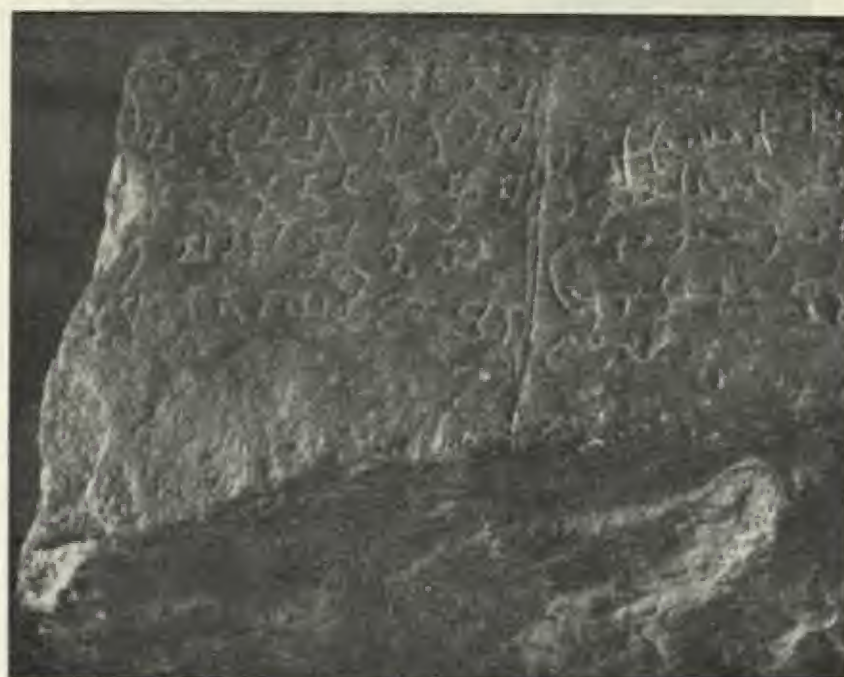


Inscription No. A

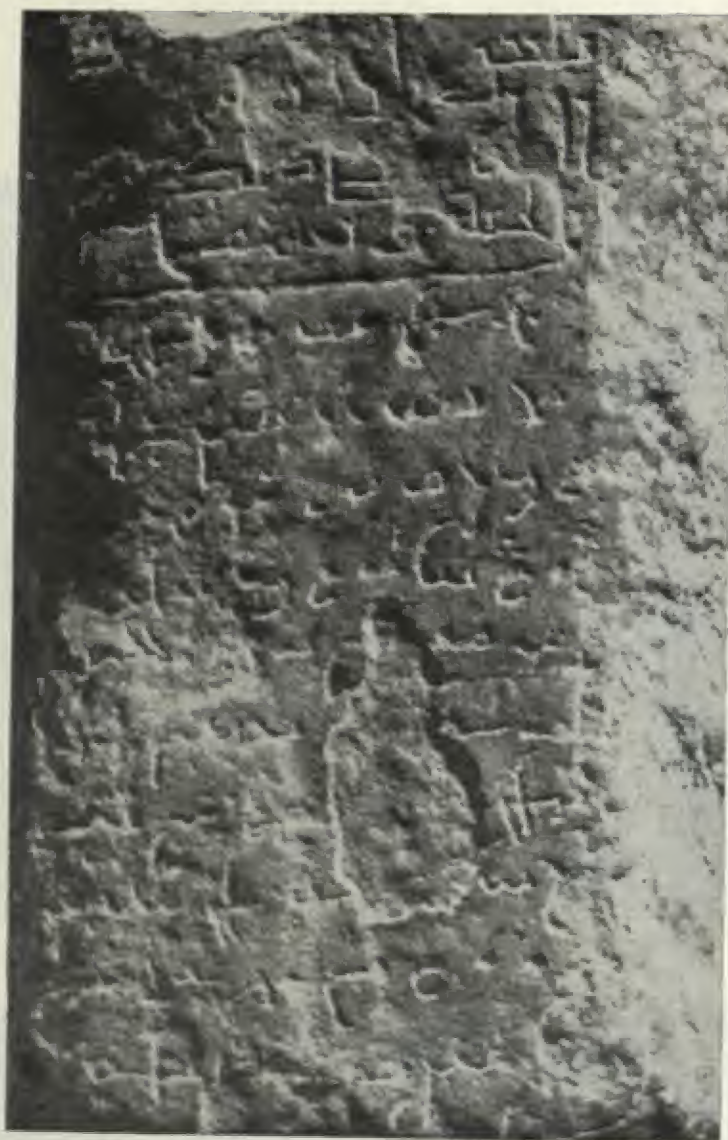




Inscription No. B (only Bactrian text)



Inscription No. B (Sanskrit text on the left)



Inscription No. C 1



Inscription No. C 2

LETTER FORMS IN TOCHI VALLEY INSCRIPTIONS

NO. B				NO. A			
(A)	𑖀	, (I)	𑖁	(A)	𑖂		
(Ka)	𑖃	, (Kho)	𑖄	(Ka)	𑖅		
(Cha)	𑖆	, (Ja)	𑖇				
(T)	𑖈	, (Ta)	𑖉, (Ti) 𑖊	(T)	𑖋, (Ti) 𑖌, (Ri) 𑖍 (Thau) 𑖎		
(Tra)	𑖏	, (Ttra)	𑖐	(Dw)	𑖑, (Di) 𑖒		
(Di)	𑖓	, (Dra)	𑖔				
(Na)	𑖕	,					
(Pu)	𑖖	, (Phru)	𑖗, (Bha) 𑖘	(Mā)	𑖙		
(Me)	𑖚	, (Myām)	𑖛				
(La)	𑖜	, (Ra)	𑖝, (Va) 𑖞	(Yā)	𑖟, (La) 𑖠 (Re) 𑖡 (Va) 𑖢		
(Śu)	𑖣	, (Sa)	𑖤	(Sa)	𑖥, (Hu)	𑖦	
(3)	𑖧	, (7)	𑖨, (8) 𑖩	(2)	𑖪	(3)	𑖫

Fig. 1

(8) و ماتین صلی اللہ علی محمد

(7) الا ولی سنتہ ثلاثہ و اربعین

(9) وال محمد الطاہرین¹⁸ (؟)**Translation**

It was ordered by Hayy, son of 'Amār to construct this tank. May God accept his pious deeds and forgive his sinful deeds! It was recorded on Friday, the thirteenth day of Jumādā I of the year 243 (-7th September, 847 A.D.) Blessings of God be upon Muḥammad, the chosen, and his descendants.

Sanskrit Text

1. (Om namaḥ samvatsa) re dvāriṃsati¹⁹
2. (tame) saṃvat 32 Kārti-
3. (Ka) māsa bahula tithau dvi (ti)-
4. (yā) yāṃ vadi 2 atra diva-²⁰
5. (se)²¹

Translation

Om. Salutation. In the thirtysecond year, year 32, in the month of Kārtika (Sept.-Oct.), on the second day of the dark fortnight. On this day.

Stone B

The Sanskrit text is in five lines. Unfortunately the stone is broken on the left hand side resulting in the loss of first few letters in every line. In consequence it is difficult to make sense by Sanskrit text alone. But with the knowledge gained from the Bactrian text, the interpretation is not difficult. The reading is given below:

1. (Om namaḥ samvatsare aṣṭatiriṃsa) titame saṃvat 38 Bhādra-
2. (pada māsa sukla paksha sapta) myāṃ sudi 7 Atra diva-
3. (se).....Naina²² -chandra Phruma²³

18. As read by Dr. Shafi. Kuraishi reads as المصطفى

19. Read *tri*.

20. Dr. Sastri wrongly read as *Deva*, resulting in wrong interpretation of the text.

21. The remaining letters are not readable.

22. *Naina* was read by Dr. Sastri as *Na(ya)na*, but the letter *i* is quite clear on the stone. I think it should be corrected as *Navina*, meaning *new* rather than *Nayana*, meaning *eye*. Hence *Navina-chandra* will be the proper name of the king.

23. This word was read as *bhupa* by Dr. Sastri, but the first letter *r* is clearly a conjunct with a short *u*, while the second letter shows the closed loop of *ma* on the left side. Moreover this reading tallies with the Bactrian text as given in part III. Either it is a part of the name or title of the king.

4.sa ya²⁴....dda²⁵....
5.kula-narapa²⁶ Khojana²⁷ -putra

Translation.

Hail. Salutation. In the year thirty-eight, year 38, on the seventh day of the bright fortnight of the month of Bhādra. On this day.....Nai (vi) na-chandra Phrūma....(established?).....king of the family of....the son of Khojana (i.e. the Kushana).

III

When Robert Gobl visited Peshawar in summer 1962, he noticed that two inscriptions of the Museum show Bactrian texts in the late Central Asian Greek cursive script. One of them is a Sanskrit-Bactrian bilingual (No. B) and the other is an Arabic-Bactrian bilingual (No. C). The estampages, which were kindly put at Gobl's disposal by Mr. M.A. Shakoov, the then curator of the Museum, enabled us to study the two Bactrian texts in autumn of the same year. It was evident that they show the same type of characters as the Berlin Hephthalite fragments. Moreover, in their vocabulary and eulogistic phraseology they are closely related, and also resemble the Kanishka inscription of Surkh Kotal. They consist mainly of sequences of titulatures of the sovereign who is finally identified with a star.²⁸

Preliminary information on these inscriptions was given by Helmut Humbach at the XXVI International Congress of Orientalists (New Delhi, January 1964). With the friendly help of the acting curator, Mr. Malik Amin Jan, he had the occasion to see these inscriptions and to make fresh estampages on his last visit to Peshawar. Together we took up the study again and could correct some errors. Thus we are able now to present our results. A detailed analysis will follow soon.

On this occasion we want to mention only the following points: As in the Surkh-Kotal inscriptions *Ypsilon* is used also for *h* (*harugo*) and for *w* (*sauro*). The letters *a*, *o*, *d* coincide as in all late documents of the Bactrian cursive. It is difficult also to discern *t* and *g*, except in the combination *st*. Diacritical points are used on different occasions: first to denote (*b*:=2); second to distinguish *a* and *o* according to the procedure of a Hephthalite fragment (*o*:=*a*); third to distinguish *g* and *t* and to denote the sound *z* according to the Arabo-Persian method (*g*:=*g*, *z*:=*z*). Lack of space, caused by deviation from the original plan, instigated the stone mason to accumulate letters and even to create bold ligatures. In our transcription such instances are marked by underlining.

24. A conjunct consonant which I cannot make out.

25. Here a verb is implied, meaning something like 'established'.

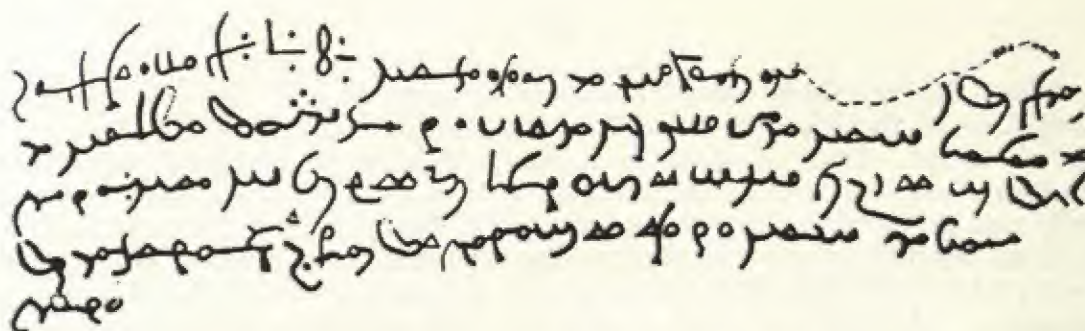
26. To be corrected as *nripa* meaning 'king.'

27. *Khojana* obviously stands for *Koshana* or *Khushana*.

28. Helmut Humbach, Die Kaniska-Inschrift von Surkh-Kotal (Wiesbaden 1960). Id. Kushan und Hephthaliten (München 1961).

1. *Bactrian text of the Sanskrit-Bactrian bilingual dated samvat 38,**xsono 632²⁹. No B*

1. zo xsono x: l: b: maho osoi gomos ahi (mo) [...n] ibixto
2. ta malbo ba³⁰o horonodogo m(i) inano gomano kaldo ta
3. stara: gado mo kirdo gi l ro sidano malizi do ni (b....)
4. bigo harougo zoladi bo starani do fromano gokado
5. staro



Tochi-Inscription 1 • Peshawar Museum • Cat.No.15 • Scale ca.1:3.

Gobl 1964.

Fig 2 (No. B (Hand Copy))

“(1) In the year 632²⁹, month six, written... by Gomo Sahi, (2) by him, the drinker-of-liquor, the lord, the shepherd of the cows, the member-of-the-cow-family³⁰. By him the kaldo (3) was made at the arrival of the star³¹, (by him) who (is) a preserver, a king of the noblemen and (4) a custodian of the inscription³². elevated beyond the stars and a scion-of-Fromo, a member-of-the-cow-house. (5)³³ a star.”

2. *Bactrian text of the Arabic-Bactrian bilingual dated xsono 635³⁴ No. C. 1*

Part I. 1. zo xsono x: l:

2. e: maho oigo
3. (o) rmzdo do miro
4. kaldo kirdo korano ta
5. malbo sido sando (st) aro
6. gomano [go] kado seouo (or seuo)

29. Not x: i: b: “612”, as proposed in New Delhi.

30. Not *nagomano* “member of the Naga family”, as proposed in New Delhi.31. This seems to have a double meaning (*slesha*). First it applies to an astronomical event, but second it refers also to the king, who is identified with a star in the following relative sentence.

32. Or “custodian of the (holy) scripture”?

33. Not *gokao* “a Kavi- (giant) among the cows”, as suggested in New Delhi.

34. The Arabic text which is very short shows now date.

7. (b) ago saroo [.....] xagano
8. mano xom (in) o kozolo
9. sauooho saroalo nibigo
10. orligo f (o) romano*
11.kaldo?

"(1/2) In the year 635, month one (3) for Ormuzd and Mihr (4) the kaldo was made by the Ku³⁵an, ³⁵ by him, (5) the drinker-of-liquor, the nobleman, the brilliant one, the star, (6) the member-of-the-cow-family, the member-of-the-cow-house, the king, (7) the lord, the headman....the member-of-the-Khagan-(8)-house, the owner-of-cows. the Kuzula, (9/10) the increaser-of-the-goods, the leader, the scion- of-Fromo, (11)....."

Tochi-Inscription 2a-Peshawar Museum-Cat.No.44.

Scale ca. 1:2.5

Göbl 1964.

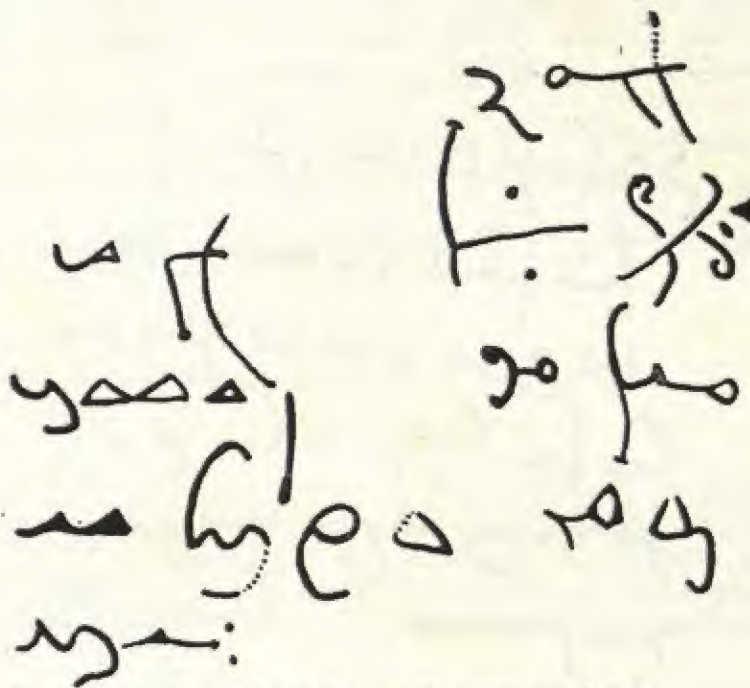
No. C 1 Hand Copy)

35. *korano* read *kozano*, late form of *kosano*.

No C. part 2

1. zo x [$\frac{y}{x}$]
2. o] no x: [l:] e: ASTRAL SYMBOL
3. a)gado. [...] ..k?a
4. l_ / do kird /o.../ tadi
5. b_ / ago.

"In the year 635, at the arrival of (a certain star)....the kaldo was made....by the tadi lord."



Todji-Inscription 2/b. Peshawar Museum. Cat. No. 41.

Scale ca. 1:2.

Göbl 1964.

Fig No. 3 (No. C 2 Hand Copy)

Besides the Bactrian dating x⁵ono 632 the first inscription contains the Hindu dating samvat 38 in the Sanskrit version (see part II). This is the year 3938 of the Śāstra era, i.e. the year 862 A.D. We are able to fix this date by consulting a third inscription, the well known Arabic Sanskrit bilingual of the Peshawar Museum (No. A above). The latter contains the Arabic dating 243 A.H., i.e. 857 A. D. and the Hindu dating samvat 32, which, on the basis of the Arabic dating, must be interpreted as samvat 3932 Śāstra, i.e. 856 A.D.).³⁶

The Śāstra or Laukika era was known in Multan, as Alberuni mentions, and he follows up this statement with his famous excursus on the Shahis of Kabul

36. The day mentioned in the Arabic version (Friday 13, Jumada I) does not agree with the calendar of the year 243, but with that of 242 A.H. (i.e. 856 A.D.). Therefore the number of the year should be corrected. By means of this conjecture the year dates of both versions of the Arabic-Sanskrit bilingual agree fully.

and on Kanishka. This is certainly not a mere coincident, because the Tochi inscriptions bear testimony to the dominion of a Kushan dynasty, which was tributary to the early Arab conquerors of this country.

Our inscriptions are of great importance for the history of this early Muslim conquest, which took place in the ninth century A.D.,³⁷ as well as for the history of the Indo-Scythians. Regarding the latter, the most interesting problem is that of the Bactrian era used in Tochi. This era must have started in the Christian year, which results from the subtraction of the Bactrian year 632 of the first inscription from its Christian year 862 (3938 *śāstra*), i.e. in the year 230 A.D.³⁸ It seems to be remarkable, that in the beginning of this Christian year a delegation of the Kushān king Po-t'iao (Vāsudeva?) had paid a visit to the Chinese court, by which Po-t'iao was given the honorary title "King of the Great Yüeh-chih who shows affection to the Wei".³⁹ The question whether this Bactrian era of 230 A.D. was established by Po-t'iao after the return of his delegation or by a rival who was successful in the meantime, has to be discussed at a later occasion.

37. It is noteworthy that not only the Bactrian texts, but also the Arabic text of the Arabic-Bactrian inscription were considered to be Mongolian, until Robert Gobl recognized their true character.

38. The exact date is January, 26, 230 A.D. The first year of the Bactrian era began in the following spring.

39. Wei Shih 3.6. a.

Personalities in Archaeology

The Late Dr. Ghulam Yazdani

These few pages are reserved to introduce those personalities who have devoted their whole life to the cause of archaeology in general and to the advancement of human knowledge in this field about this region in particular. From the driest details of the archaeological materials it is, no doubt, satisfying to learn about the human beings who have pursued their activities in out of the way places almost in seclusion to resuscitate kins of their own land, who are long dead and gone, and to bring before the view of the coming generations the dead civilizations of the past as if to draw a long vista of human life on the face of this earth. Perchance in this rebirth of the old the archaeologist might himself relive. Whether that is possible or not, it is surely given to the fellow archaeologists to remember their old colleagues and recount their services done in this field. Of all such personalities the late Dr. Ghulam Yazdani deserves to be remembered first of all, for among the Muslims of our time he can be taken to be the pioneer in the field devoting his attention both to the ancient and medieval archaeology.

The late Dr. Ghulam Yazdani was born at Delhi in December, 1885. His father Maulvi Ghulam Jilani was a reputed scholar of Persian and Arabic and Dewan of Dojana State. From him Dr. Yazdani inherited the scholarly tradition, which was further added from the mother's side, the mother being a descendant of Maulvi Shah Abdul Haq, the celebrated scholar and jurist of the reign of the Mughal emperor Shah Jahan. As was the usual practice among the Muslims, Dr. Yazdani received his early education at home in Arabic and Persian, and later joined the school and college. He graduated in 1905, standing first in the University in Arabic, Oriental Classics and English and winning a purse and three gold medals. The following year he took the M.A. degree of Calcutta University.

Dr. Yazdani started his career as a Government of India Archaeological Scholar, he being one of the two earliest recipients of this scholarship under the new scheme formulated by Sir John Marshall. During this period he specialized in the study of Arabic palaeography and epigraphy. But somehow there was a little interruption in his archaeological career. From 1907 to 1914 Dr. Yazdani joined the profession of teaching. He served as Professor of Persian or Arabic first in the St. Stephen's College, Delhi, next in the Government College, Rajshahi and finally in the Government College, Lahore. At Rajshahi Dr. Yazdani became associated with the great scholar Zamindar Mr. Sanat Kumar Roy, and with him was responsible in the foundation of the Varendra Research Society and the



THE LATE DR. GHULAM YAZDANI
(1885 to 1962)



Portrait of a man in a suit and tie.

establishment of the Varendra Research Museum. During this educational career he was awarded Griffith's prize for original research work in Indian History in 1913 by the Calcutta University. But this teaching line was to be surpassed by the archaeological profession which Dr. Yazdani started in 1914 as the first Director of Archaeology in the former Hyderabad State. In Hyderabad he stayed on until his death on 15th November, 1962.

As an archaeological administrator Dr. Yazdani had to organize the new department of archaeology in Hyderabad State. Following the lines of the Government of India Department of Archaeology, Dr. Yazdani developed four-fold branches of archaeology—conservation of monuments, excavation of important sites, establishment of a museum at Hyderabad and publication of annual reports. Dr. Yazdani was a man of all interest in archaeology. Though his own educational qualification was confined to Arabic and Persian and to the study of medieval Muslim history, his interest far surpassed this limit. As an administrative head he realized his duty to pay attention to all kinds of monuments. He untiringly devoted his energies to their recovery, conservation and interpretation in a manner commendable to all. Besides the attention that he paid to the Hindu temples and Muslim monuments, he had the foresight to recognize the world-wide importance of the caves at Ajanta and Ellora. The zeal with which he devoted himself to the repairs of the Ellora Caves is writ large in the resuscitation of this great monument and his name is bound to be associated with the long life that he gave to these caves. Ajanta attracted Dr. Yazdani quite naturally as others have been attracted too. The time and energy that he devoted to the study of the cave painting, their exact photographic reproduction, understanding the depth of meaning, and the interpretation of the different scenes—all these collected together in the most beautiful volume on Ajanta—a monument to the world-famous caves as well as to the author himself—do tell us that Dr. Yazdani became as much an adept in the Pre-Muslim history and Culture as in the Muslim. No wonder that Dr. Yazdani was chosen to be the editor of *The Early History of the Deccan*, published in 1960, and the reviewer of this book, Prof. A. L. Basham correctly remarks: "No other Indian Muslim of Dr. Yazdani's generation devoted as much scholarly attention to India's pre-Muslim past."¹ It is for this universal scholarship that Dr. Yazdani was elected to be the President of such literary associations as All India Oriental Conference (1940), All India History Congress (Archaeological section, 4th Session) Bihar and Orissa Research Society Patna (1941), and Bhandarkar Oriental Research Institute, Poona (16th anniversary). In order to arouse public interest in archaeology, he laid the foundation of Hyderabad Archaeological Society. But he never lost his love of Oriental Classics, for he was long responsible for running the Hyderabad Persian Manuscript Society, while he himself edited the *Amal-i-Salah* for the Bengal Asiatic Society, the *Matsnawi of Jalaluddin Rumi* and *Riadul Insha*.

As an epigraphist Dr. Yazdani's knowledge was unrivalled. His services were specially requisitioned by the Government of India to edit *Epigraphia Indo-Moslemica* from 1915 to 1941. After going through these volumes it appears that Dr. Yazdani was decipherer, translator, and editor all by himself. For over twenty-five years Dr. Yazdani interpreted Indo-Muslim epigraphy and set the standard for

1. *Bulletin of the School of Oriental and African Studies*, 1913, Vol. XXVI, Pt. 2, p. 445.

others to be followed by his students in this field, who later succeeded him in Government of India.

Above all we can hardly forget to mention the great part that he played in interpreting the Indo-Muslim architecture. His first venture in this field was a small but delightful book on *Mandu, the City of Joy* — a name which he aptly chose from its old Persian name *Shadibad*. Those who have seen Mandu and have read this book, can alone realize how Dr. Yazdani has remarkably succeeded in bringing out the archaeological beauties of the place and telling the tale of the natural delights and royal romances of the place. His mature mind later produced the most important work on *Bidar, its History and Monuments* — a work of classic importance that will long remain a standard in this field. His fellow archaeologists only wish that he should have been given a chance to produce works on more important monuments at Agra and Delhi. Absence of such works on these important places is a great lacuna in Indian archaeology. Nay, Indo-Muslim architecture has been sadly neglected and even today there is no officer in the Government of India, Department of Archaeology, who is qualified to interpret the great architectural heritage that the Muslims have bequeathed to India.

Till the last moment Dr. Yazdani continued to be associated with the research activity. He was a member of the Governing Body of the reputed Journal *Islamic Culture*, issued from Hyderabad (Deccan). It is for his literary activities and original research that Government of India conferred on him in 1936 the title of *Order of the British Empire* and later in 1959 he was awarded Padma-Bhushan. The Osmania University, Hyderabad, also honoured him by awarding in 1943 the honorary degree of D. Litt., and in 1953 the Aligarh Muslim University followed suit.

The fellow archaeologists hereby record with deep appreciation the great services rendered by Dr. Ghulam Yazdani to the cause of Indo-Pakistan archaeology and hope that the fields of research that he started, will long remain an inducement to the younger generation for further advancement in archaeology and humanities.

May God in His mercy bless his soul and find a place for him in heaven!

A. H. Dani.

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Reviews

H. D. Sankalia.—Prehistory and Protohistory in India and Pakistan.

Published by the University of Bombay, 1962, pp. -i-xiv + i-xxii and 1-315, plates i-xxxvi, 130 figures, and 3 charts and tables price Rs. 39.50.

The book is an elaborated version of Pandit Bhagwanlal Indraji lectures which the learned professor Dr. Sankalia delivered under the auspices of the University of Bombay in December 1960. In this book the versatile professor has sought to incorporate the up-to-date results of the explorations and researches in the fields of prehistory and protohistory of this sub-continent. The book is divided into *Introduction* and four chapters. The introduction first discusses the geographical background, defines some terms and finally speaks on "the four ages in India"—palaeolithic (lower), palaeolithic (middle), mesolithic, and neolithic and chalcolithic cultures — which form the main headings of the four chapters in the book.

The wealth of detail has been gathered from various sources and summarised under different chapters which have been profusely illustrated. They all speak of the high scholarship of the author, but from the point of view of critical evaluation of the materials the book leaves much to be desired. However, it will long remain a ready reference book to the student and research worker. The author deserves commendation for the production of such a voluminous work and placing it before the co-workers in the field.

A. H. Dani

Sudhansu Kumar Ray—Indus Script.

Published by Dr. M. K. Roy of the Indian Institute of Egyptology,
New Delhi, 1963, pp. 1-16 and 10 figures.

The pamphlet is a *Memorandum* No. 1, containing a brief resume¹ of the thesis on the interpretation of the Indus Script. After the initial efforts made by Gadd, Sydney Smith, Langdon and Hunter to recognise the Indus signs Mr. Ray has further advanced our knowledge and placed before us the different components in the formation of the Indus signs. The analytical approach adopted here is the recognisable principle in the palaeographical world. I entirely agree with him and accept his important discovery of the two main principles underlying the formation of the Indus signs, viz.—(1) the accentuation of the original signs, and (2) combination of two or more signs—both these principles were hinted by me in my chapter on the *Indus Script*.¹ My analysis was only exploratory as I had not much time to

1. A. H. Dani, *Indian Palaeography*, Oxford, 1963, p. 19.

devote to this script, but Mr. Ray has successfully worked out in detail and further shown the evolution of simplified forms from the original recognizable animals or objects. As far as this stage is concerned, it is clearly an advance over our existing knowledge. In order to arrive at this stage it is not necessary to take help from the modern Indian scripts because too much reliance on the later scripts may defeat the very purpose of decipherment unless, of course, Mr. Ray can show a continuity from the Indus script to the later writings and establish a connection between them. Any way it is hard to comment on the values proposed unless other details are published.

A. H. Dani

Sir John Marshall—The Buddhist art of Gandhara.

Memoirs of the Department of Archaeology in Pakistan, Volume I.

Cambridge, 1960, pp. i-xviii and 1-118, and plates 111.

In his last study the late Sir John Marshall, the great excavator of Taxila, finally came out with his opinion on the chronology and evolution of the "Early" phase of the Gandhara art—the "Early" phase being limited to a discussion of the stone sculptures together with a few stucco heads found at Taxila. The readers will, no doubt, be sorry to read through the book as the excavator has based his conclusions more on style criticism than on the evidence of stratigraphy. The argument of style is not above doubt. "Hellenism" still prejudices the discussion of Sir John, and he adheres to his old classification of "Early" Gandhara and "Indo-Afghan" schools. Nay, he has created one more—"a small local school at Taxila" (pp. 24-25) on the basis of two sandstone sculptures (Figs. 27 and 28). The latter is even taken to be that of *Bodhisattva*, dating "from a time when the canonical types of the Buddha and Bodhisattva had not yet been fixed". The first was found at Sirkap, but without taking into account its archaeological context Sir John relegates both of them to one school and one period. There is no doubt that their style is entirely different, but how far one can rely on the sole evidence of the curly hair for dating them to the Saka-Parthian period, as Sir John has done? Similarly the appearance of the Buddha in the panel representation (Fig. 53) can be easily understood to have developed from the panels illustrated in plates 40-47, but here the Buddha is depicted in fully developed canonical form. Therefore the Buddha figure must have evolved before he was represented in this panel. It is strange that nothing is said in the book on the Buddha appearing in the Kanishka relic casket. Though the book is a welcome addition from the pen of an expert, it leaves much to be desired particularly on the main problem of the Gandhara art in the light of the recent discussion, which have not been taken into account at all.

A. H. Dani

T. T. Paterson and H. J. H. Drummond—Soan the Palaeolithic of Pakistan.

Memoirs of the Department of Archaeology in Pakistan, No. 2,
Karachi, 1962, pp. 171 including 59 figures and 4 plates.

This is a new study of the prehistoric material collected in the thirties of this century by the Yale-Cambridge expedition. This is welcome, as the study is said to be a complete report on the tool types by the explorer Mr. Paterson himself in cooperation with Mr. Drummond. So far all the prehistorians have based their opinion on the first report¹ and on the analysis made by Movius.² Now this study will, no doubt, be widely consulted. But this study appeared rather too late, and in the context of our present-day knowledge of the prehistory of India and Pakistan it is clearly out of date. A book on "The Palaeolithic of Pakistan" cannot be written in isolation, away from the new developments, as the present book particularly concerns itself. Even the findings on the Beas³ have not been referred to. The "Soan" today is not an isolated phenomenon. I wonder how many prehistorians today will give it an independent and secluded position, as is implied in this book? Time has come when we have to go beyond the stage brought by Movius and place "Soan" in the world picture. This new concept was probably not possible to achieve by Mr. Paterson who has now deserted prehistory and taken to some other profession.

A. H. Dani

Khan Mohammad Waliullah Khan—Sikh Shrines in West Pakistan.

Memoirs of the Department of Archaeology in Pakistan, No. 3,
Karachi, 1962, pp. 68+7 and 76 plates and 1 map.

This is a welcome survey of the Sikh Shrines in West Pakistan conducted by a man who has devoted his life to the preservation of the ancient monuments. It is in the fitness of things as well as a gesture of goodwill on the part of the Government of Pakistan that such a survey was undertaken so that today these Shrines could be well looked after on a Government level. As the author rightly says, "the present work is not intended to present a study of the architectural genius of the followers of Sikhism", but here "an attempt has been made to describe briefly the important Sikh Shrines... Each category of the Shrines has been arranged districtwise in alphabetical order. Brief life sketches of the Gurus are given before the description of Shrines associated with them. A consolidated list of all the Shrines has also been given at the end." The account is rather very brief and the description very sketchy, in some cases bare names of the shrines. However, further studies can be made on the basis of this book.

A. H. Dani

1. De Terra, H & Paterson, T.T.—*Studies in the Ice Age in India and Associated Human Cultures*, Washington, 1939.
2. H.L. Movius (Jr.)—'The Lower Palaeolithic Cultures of Southern and Eastern Asia' in *Transactions of the American Philosophical Society*, Vol. XXXVIII, 1948, pp. 163-92.
3. B.B. Lal—'Palaeoliths from the Beas and Banganga Valleys, Panjab' in *Ancient India*, No. 12 (1956), pp. 58-92.

H. D. Sankalia—Indian Archaeology today.

Asia Publishing House, Bombay, 1962, pp. 1-144, 12 plates and 11 figures. Price Rs. 12.50.

The book incorporates a series of three lectures delivered by Prof. Sankalia under the auspices of the Heras Institute of Indian History and Culture. The three lectures concern with "Changing aims and methods of Indian archaeology", "Indian archaeology and its contribution to prehistory and protohistory", and "Indian archaeology and its contribution to protohistory and early history."

The three lectures admirably sum up the history of the archaeological work in this sub-continent and also give an account of the archaeological work relating to prehistory, protohistory and ancient history. In the last two fields attempt has been made to bring in anthropological and literary evidences in order to square them with the archaeological data and to see whether the two fit in to give a coherent account of the people of this sub-continent. The result is not very satisfactory: e.g. on pp. 103-4, the Dravidian question is tackled in relation to the megalithic culture but the two are not found fit. On p. 96, the neolithic question is discussed in relation to the "aboriginal tribes". The relationship is rightly doubted. Controversial points are touched on pp. 28-29, where chronological limits of prehistory and protohistory are given. The discussion, of course, is tentative. But the most useful point raised is the necessity of understading the various cultures of this sub-continent regionwise on a thorough investigation of the local materials. In this task both the universities and the Government must combine (p. 125) and lead to a new age of archaeological research in this sub-continent—a change from mere official routine to the university level of research and exploration, a theme so well understood in the advanced countries of the world.

A. H. Dani

Dr. M. Abdullah Chaghatai—Painting during the Sultanate period (C.E. 712-1575).

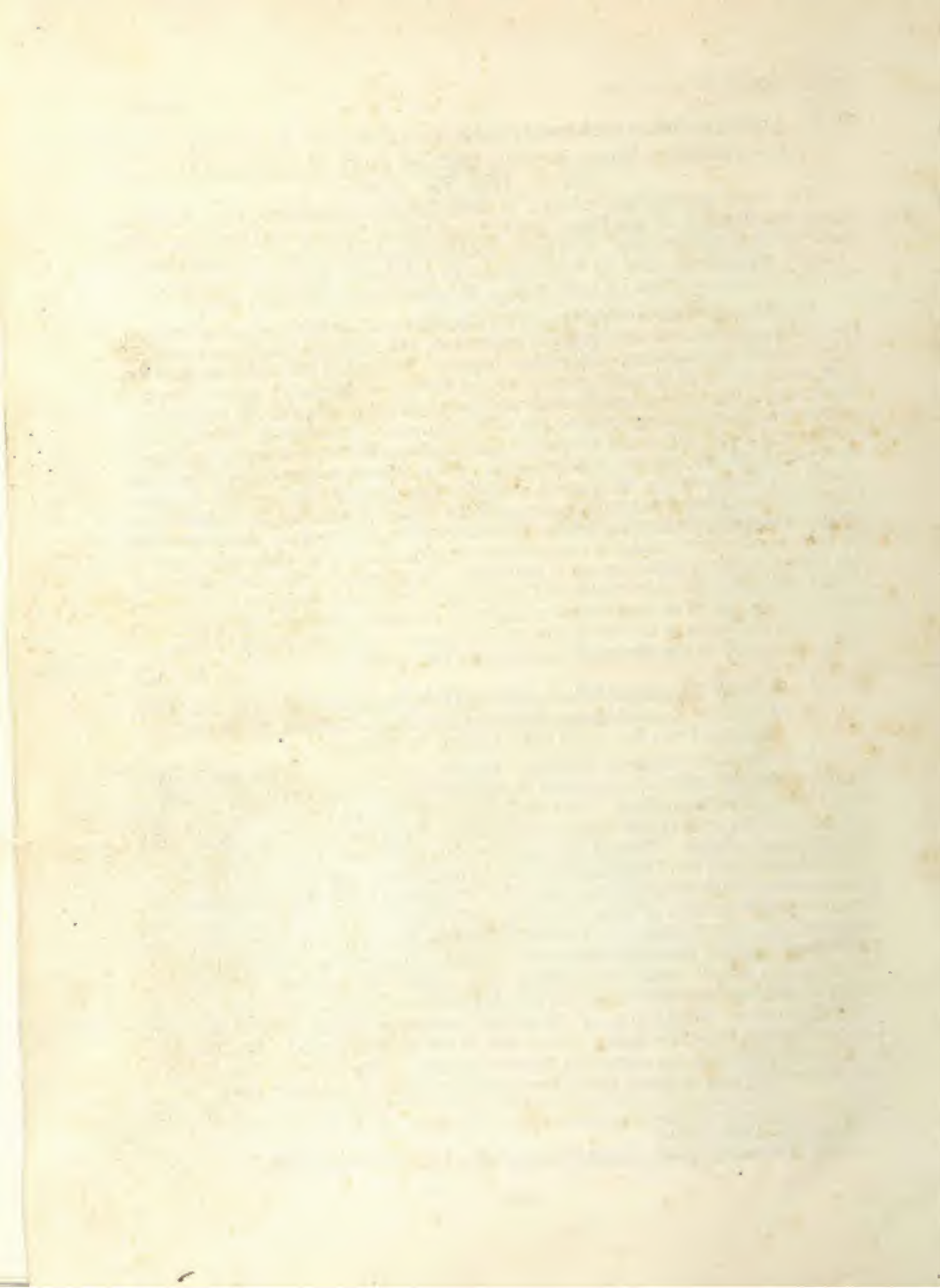
Published by Kitab Khana-i-Nauras, Kabir Street, Lahore, pp. 62 and 21 figures, Price Rs. 15.00 Pak. Abroad 30 Shillings.

This is the first coherent attempt to give an account of the pre-Mughal Muslim painting in this sub-continent on the basis of the literary evidence as well as on the available illustrations. The book is divided into two parts; the first part tries to trace the style of the imperial court at Delhi and the second part deals with the provincial schools. Though the actual evidence of illustrations is scanty and of doubtful character, Dr. Chaghatai has brouht together in one place all the known examples for whatever worth they are. Dr. Chaghatai has rightly emphasized on the non-Indian features of these paintings and pointed out many trends that could be traced to Central Asian or Persian influence, but the main character of the "Sultanate" period painting remains ill defined. Among the provincial schools the Gujrati school takes precedence and shows a gradual evolution—a subject which has been well discussed by other authors.¹ It is to this school that the newly-discovered illustrations of *Chandain*,² preserved in the Central Museum, Lahore, belong, but their dating surely falls in the Mughal period. Dr. Tarafdar has correctly pointed out many late features in them. The subject of this book is very interesting and original, and a new critical work on it is a great need.

A. H. Dani

1. N. C. Mehta — *Indian Painting*.

2. See Dr. M.R. Tarafdar's article in *Journal of the Asiatic Society of Pakistan*. Vol. VIII. (1964)



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Duplicate

ANCIENT PAKISTAN

Bulletin of the Department of Archaeology

University of Peshawar

Volume I



Peshawar
1964

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UNIVERSITY OF PESHAWAR

Editor :

PROFESSOR AHMAD HASAN DANI

M. A. Ph. D. (London)

Secretary :

Ms. FARZAND ALI DURRANI

M. A. (Peshawar), M. A. (London)

All communications to be addressed to the Secretary.

Price : Rs. 15.00 Pak.

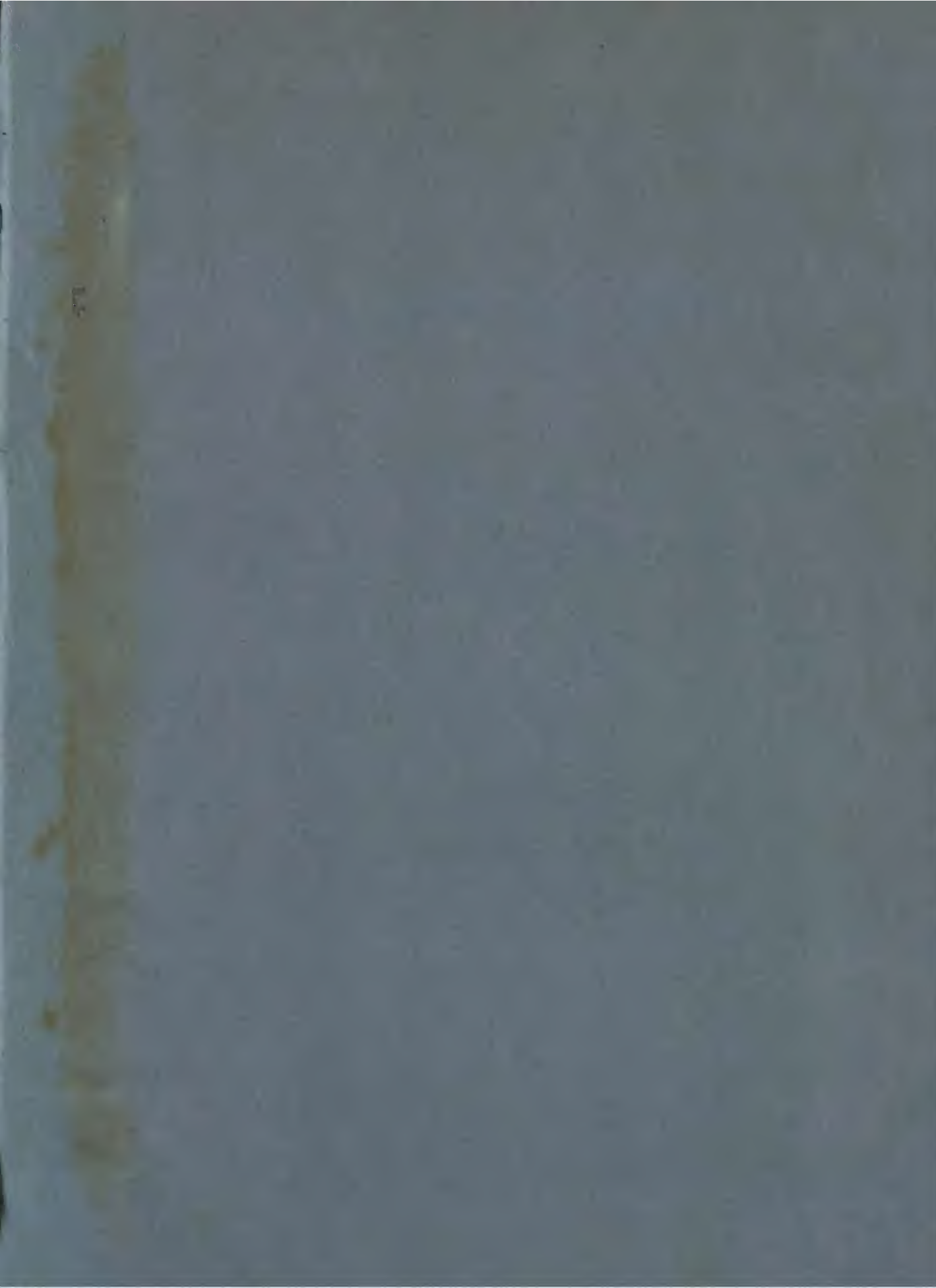
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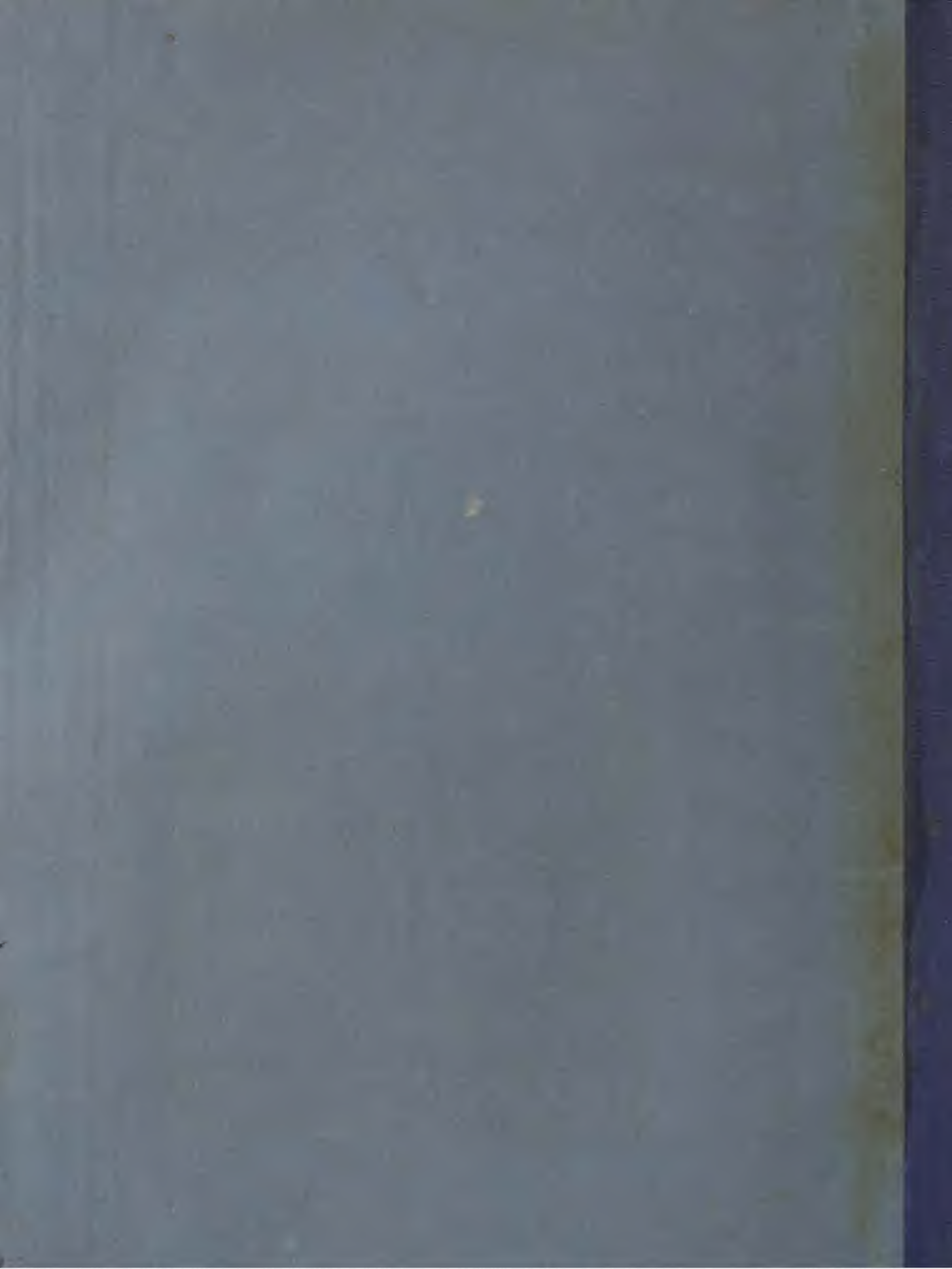
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1. PUSHKALAVATI — Archaeological
Guide Series No. 1 (1963) Price Re. 1.00
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